



 **Trifecta™**

*RAISING THE STANDARD  
FOR WORLD-CLASS WHEEL ENDS*



# STEMCO®

STEMCO's Trifecta™ Pre-Adjusted Hub Assembly combines premiere STEMCO wheel end technologies with the trusted Webb® hub in a single, pre-adjusted assembly, ensuring a faster and more secure installation. Trifecta eliminates the need to purchase, install and adjust separate wheel end components and fasteners while guaranteeing reliability.

## SAFETY

Provides quick, easy installation with a simple torque-down procedure and no bearing adjustment.

Includes Zip-Torq® axle fastener featuring a unitized design with no additional clips, keepers, snap rings or screws, increasing simplicity for technicians.

## PERFORMANCE

Trifecta includes the Discover® XR, a high-performance seal with patent-pending GlideLock™ technology which essentially eliminates installation issues by reducing installation force by 50% with no pre-lube required—an industry first.

Discover XR and the Defender ESP™ hub cap combine to set a new standard for contamination exclusion and raise the bar for long-life wheel end systems.

## CONFIDENCE

Features industry-standard components manufactured by STEMCO & Webb Wheel.

Backed by STEMCO support nationwide, including on-site training and certification, TMC-approved procedures and a 5-year/500,000 mile parts and labor OEM warranty.

## SIMPLE INSTALLATION. TOTAL PEACE OF MIND.

Designed for fleets that value component longevity between service intervals and keeping time in the service bay as brief as possible, the Trifecta hub assembly represents the peak of durability and simplicity—the toughest, most resilient wheel end components united in an easy-to-install package.

### Webb Wheel Hub

- Industry-standard hubs
- Precision machined for Trifecta
- Ductile iron & aluminum options available
- Over 70 years of hub expertise

### Defender ESP Hub Cap

- Made from high-strength composite material
- 100% corrosion-free
- ESP (Extended Service Plug) prevents contamination from entering, protects lubricant integrity

### Zip-Torq Axle Fastener

- Simplified, one-piece advanced axle fastener provides fast and simple installation
- Self-ratcheting feature prevents back-off
- No clips, keepers or set screws to install
- Easy removal

### STEMCO Spacer (patent-pending)

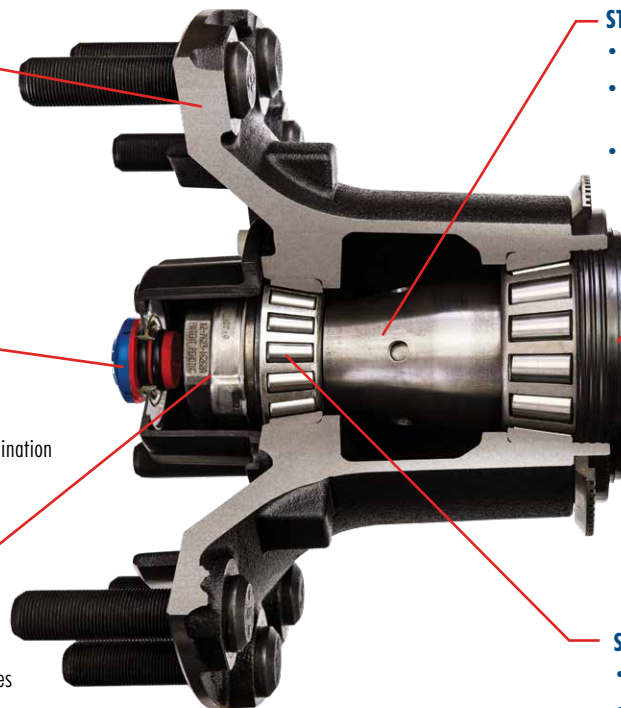
- Designed for optimized lubricant flow
- Reduces fretting corrosion between spindle and bearing mating surfaces
- Extends spindle, bearing and seal life

### Discover XR Wheel Seal

- High-temperature, long-life seal
- 4-zone labyrinth and slinger provide unmatched contamination prevention
- GlideLock patent-pending technology reduces installation force by 50%—no pre-lube required
- Addresses industry's leading seal failure modes—cocked seals and excessive heat generation

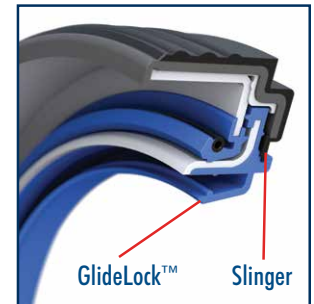
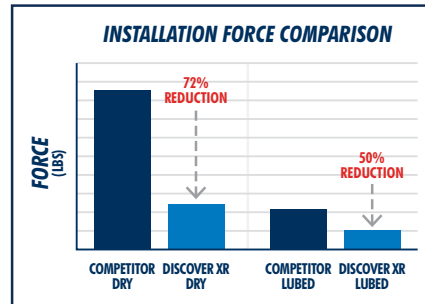
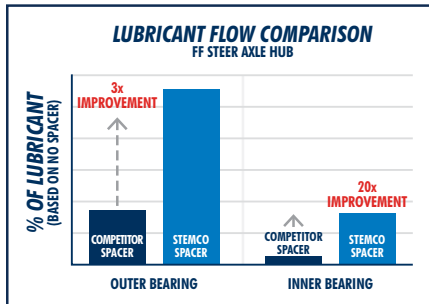
### STEMCO Manufactured Bearings

- Exceed ABMA performance and durability standards
- Included in OEM long-life wheel end systems



## TRIFECTA HUB ASSEMBLY

ASSEMBLY PART NO.	DESCRIPTION
453-0136	FF 5.44" DFlat, 14.6 K, 2.74" Wheel Stud, Iron Hub, w ABS
453-0236	FF 5.44" DFlat, 14.6 K, 3.19" Wheel Stud, Iron Hub, w ABS
453-0137	FF 5.44" Tang, 14.6 K, 2.74" Wheel Stud, Iron Hub, w ABS
453-0237	FF 5.44" Tang, 14.6 K, 3.19" Wheel Stud, Iron Hub, w ABS
453-0173	R, 40 K, 3.15" Wheel Stud, Iron Long Hub, w ABS
453-0273	R, 40 K, 4.06" Wheel Stud, Iron Long Hub, w ABS



## HUB PART NUMBER CROSS REFERENCE FOR CONMET TO TRIFECTA

ConMet PreSet						Truck OE Applications					Trifecta					
Hub Part No.	Offset	Material	Stud Standout	GAWR	Weight (lbs.)	DTNA	PACCAR	Navistar	Mack	Volvo	Assembly Part No.	Spindle	Offset	Material	Stud Standout	Weight (lbs.) <sup>†</sup>
<b>FF - FRONT AXLE - DRUM BRAKE</b>																
10082200	5.44"	Aluminum "Turbo"	2.47"	13.2K	38	•					453-0136	D-Flat	5.44"	Iron	Short (2.74")	51
											453-0137	Tang	5.44"	Iron	Short (2.74")	51
10082201	5.44"	Aluminum "Turbo"	2.92"	13.2K	39	•					453-0236	D-Flat	5.44"	Iron	Long (3.19")	52
											453-0237	Tang	5.44"	Iron	Long (3.19")	52
10082202	5.44"	Aluminum	2.47"	14.6K	46	•					453-0136	D-Flat	5.44"	Iron	Short (2.74")	51
											453-0137	Tang	5.44"	Iron	Short (2.74")	51
10082203	5.44"	Aluminum	2.97"	14.6K	47	•					453-0236	D-Flat	5.44"	Iron	Long (3.19")	52
											453-0237	Tang	5.44"	Iron	Long (3.19")	52
10082204	5.44"	Iron	2.60"	14.6K	55	•					453-0136	D-Flat	5.44"	Iron	Short (2.74")	51
											453-0137	Tang	5.44"	Iron	Short (2.74")	51
10082205	5.44"	Iron	3.06"	14.6K	56	•					453-0236	D-Flat	5.44"	Iron	Long (3.19")	52
											453-0237	Tang	5.44"	Iron	Long (3.19")	52
<b>R - DRIVE AXLE - DRUM BRAKE</b>																
10082216	Long Barrel	Aluminum	2.94"	23K	52	•	•		•		453-0173	—	Long Barrel	Iron	Short (3.15")	71
10082217	Long Barrel	Aluminum	3.81"	23K	53	•	•		•		453-0273	—	Long Barrel	Iron	Long (4.06")	72
10082218 <sup>‡</sup>	Long Barrel	Iron	3.06"	26K	64	•	•		•		453-0173	—	Long Barrel	Iron	Short (3.15")	71
10082219 <sup>‡</sup>	Long Barrel	Iron	3.97"	26K	65	•	•		•		453-0273	—	Long Barrel	Iron	Long (4.06")	72

<sup>†</sup> FF AM Assemblies Include Defender ESP Hubcap (weight not included in Trifecta Assembly figures)

<sup>‡</sup> ConMet "Side Pull" Designs—lower weight but higher cost

### FF STEER AXLE APPLICATION GUIDE | SPINDLE CROSS SECTIONS



# FREQUENTLY ASKED QUESTIONS

## What is Trifecta?

Trifecta is a pre-adjusted hub assembly—STEMCO's latest commercial vehicle wheel end innovation launched in 2018. The assembly combines STEMCO's high performance Discover XR seal, the revolutionary Zip-Torq axle fastener, precision bearings, a spacer optimized for lubricant flow, and the Defender ESP hubcap, all housed in a precision machined hub. The combination of these premier components ensures mistake proof installation and less downtime; providing fleets the Trifecta of SAFETY, PERFORMANCE, AND CONFIDENCE.

## What does pre-adjusted mean?

Pre-adjusted hubs eliminate the need for bearing adjustment. The precision manufactured bearings, spacer and hub provide a fixed dimensional distance between the inner and outer bearings eliminating the need to manually adjust the bearings. A torque wrench must be used to set the axle fastener according to the pre-adjusted hub manufacturers recommended torque setting, with no backing off the nut.

## What tools do I need to install the Trifecta hub?

The only tools needed are a torque wrench and socket. Please download the Zip-Torq installation instructions or see the back of the Zip-Torq box for socket sizes.

## Where can I buy service hub assemblies or components?

Trifecta hub assemblies and components can be ordered through the independent aftermarket or original equipment dealers. For more information contact your STEMCO distributor, local STEMCO sales person, or call 1-800-527-8492. In Canada, call 1-877-232-9111.

## What are the service intervals?

The recommended service intervals are detailed in STEMCO's Tech Tip #21 and TMC's RP 631.

## Which lubricants are approved with the Trifecta pre-adjusted hub?

The list of approved lubricants can be found in STEMCO's Tech Tip #34.

## Why does the spacer have holes?

The STEMCO patent pending spacer is designed with six center holes allowing lubricant to reach the mating surfaces between the interior diameter of the bearings and the spindle. The improved lubricant flow prevents fretting and associated corrosion from lubricant contamination, increasing bearing, seal and spindle life. Traditional spacers are solid and tend to block lubricant flow to the mating surfaces, potentially leading to fretting corrosion and frozen hubs.

## Can I remove the spacer?

Yes, the spacer can be removed. If the spacer is removed, the bearings must be adjusted manually following TMC RP 618 procedures. Please refer to STEMCO's Tech Tip #50 for more information.

## What are half stand bearings?

Half stand bearings are precision bearings manufactured to a tighter tolerance than standard bearings. They are used in pre-adjusted hub assemblies to eliminate the need for manual bearing adjustment. STEMCO's half stand bearings can be identified with the prefix HS. Bearing cups and cones are a matched set and must be replaced as a set. Only STEMCO half stand bearings are approved for the Trifecta pre-adjusted hub assembly.

## What is GlideLock?

GlideLock is a patent pending feature on the ID (interior diameter) of the Discover XR (Extreme Runtime) seal. GlideLock significantly reduces the installation load on the seal, which helps maintain the integrity of the sealing lips during hub mounting and reduces the potential for heat generation and cocked seals.

## Does the Discover XR seal require pre-lubrication?

The Discover XR seal's GlideLock technology is designed to perform with or without pre-lubrication, eliminating one of the industry's leading causes of seal failure—heat.

## Will the STEMCO components work in a non-Trifecta hub?

The Discover XR seal and the Zip-Torq axle fastener can be used in any commercially available wheel end. The STEMCO spacer is designed to work only in a Trifecta pre-adjusted hub assembly.

## Can I use a Pro-Torq axle fastener with my Trifecta hub?

The Trifecta hub comes standard with the Zip-Torq axle fastener. However, Pro-Torq can be used with the system, replacing Zip-Torq during routine maintenance.

## Can I use Pro-Torq or Zip-Torq axle fasteners with other pre-adjusted hubs?

Yes. Pro-Torq and Zip-Torq can be installed with other brands of pre-adjusted hubs. Please refer to the hub manufacturer's torque recommendations for proper axle fastener torque specifications.

## Are STEMCO hub caps required with the Trifecta hub?

Yes. To ensure lubricant integrity and proper venting in long life wheel end systems, and to maintain the STEMCO warranty, the Trifecta hub requires STEMCO Defender or aluminum hub caps with STEMCO's ESP or Sentinel technology.

## Can I convert the Trifecta hub to a manually adjusted hub?

Yes, the spacer can be removed and the bearings can be adjusted manually following TMC 618 procedures. Please refer to STEMCO's Tech Tip #50 for more information.

## What are the axle fastener torque specs for the Trifecta hub assembly?

The Zip-Torq axle fastener torque specifications in a Trifecta hub are 200 lb/ft for the steer and drive axles. Simply torque the nut to 200 lb/ft and spin the hub one full rotation. Repeat two additional times. Do not back off the nut.

## What are the currently available applications?

The part numbers currently released include the following TRUCK applications: 5.44" offset FF (steer axle) and Long-Barrel R (drive-axle). The FF applications are a common Freightliner application. The long Barrel R is also a typical Freightliner application, as well as some PACCAR drive axle applications.

## Where can I get more information?

Please visit [stemco.com/trifecta](http://stemco.com/trifecta) or call 1-800-527-8492 for more information. In Canada, call 1-877-232-9111.

## Making the Roadways Safer®

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