



PreSet® / PreSet Plus® Seal & Spacer Installation Instructions

Replace the seal any time the hub is removed from the spindle. If the spacer has seen duty service, replace the spacer. A new spacer will ensure proper bearing adjustment is maintained. This kit contains one wheel seal and one bearing spacer for selected specific axle type.

Hazard Alert Messages

⚠ DANGER

A Danger alert indicates a hazardous situation which if not avoided, will result in death or serious injury.

⚠ WARNING

A Warning alert indicates a hazardous situation which if not avoided, could result in death or serious injury.

⚠ CAUTION

A Caution alert indicates a hazardous situation which if not avoided, could result in minor or moderate injury.

NOTE

A note includes additional information that may assist the technician in service procedures.

⚠ WARNING

Prior to installing the bearing spacer in this kit, verify the hub is a ConMet PreSet or PreSet Plus. Only ConMet PreSet and PreSet Plus hubs are designed to fit these components and function properly. Use of this bearing spacer in hubs other than ConMet PreSet or PreSet Plus could result in catastrophic wheel end failure.

PreSet Plus hubs with an integrated spindle nut were introduced in 2013. If your hub is equipped with the integrated PreSet Plus spindle nut (see Figure 1), make note of the different requirements in the following instructions.

PreSet Plus hubs feature an integrated spindle nut held in place with a retaining ring.

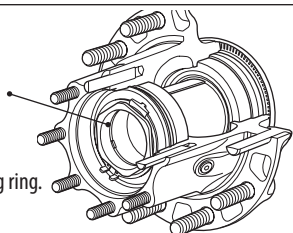


Figure 1

PreSet Plus

Disassembly

1. Remove the spindle nut system.
 - a. If equipped with a one-piece or multi-piece spindle nut, follow the manufacturer or OEM guidelines for removal.
 - b. If equipped with a PreSet or PreSet Plus spindle nut, remove the red locking ring from the spindle nut assembly. Use caution not to damage the locking ring.
 - c. For the PreSet spindle nut, remove the spindle nut and slide the hub off of the spindle.
 - d. For the PreSet Plus spindle nut, use a breaker bar to loosen the spindle nut. Be aware that PreSet Plus spindle nut installation torque is 300 ft-lbs for steer hubs and 500 ft-lbs for drive and trailer hubs. After the spindle nut is initially loosened with a breaker bar, loosen the spindle nut to remove the hub from the spindle. The internal spiral snap ring will act as a hub puller and will aid in removal of the hub from the spindle. Do not exceed 50 ft-lbs of torque when removing the hub from the spindle. If the hub will not come off without exceeding this torque value, remove the spiral snap ring and the spindle nut assembly and use a conventional hub puller to remove the hub from the spindle.

e. If part of the seal remains on the spindle, carefully remove the part of the seal that remains on the seal journal.

2. Remove the outer bearing cone from the hub assembly being careful not to drop it.

3. Place the hub on its outboard end and remove and discard the seal.

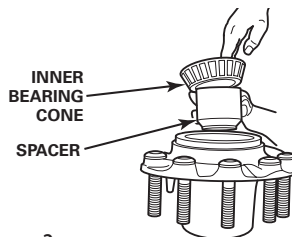


Figure 2

4. Remove the inner bearing cone and spacer from the hub assembly (see Figure 2).

Reassembly

1. Place the hub, seal end up, on a clean work surface.
2. Visually inspect the inner bearing cup and cone for signs of heat, wear or damage. Reference TMC RP644 for proper component inspection procedures.
3. Lubricate the inner bearing cone with the same lubricant as will be used in the hub and install it into the inner bearing cup (see Figure 3).

⚠ CAUTION

If during any bearing inspection there is an indication that the existing bearing must be replaced, bearing cups and cones must be replaced as a set. You must only replace bearings with ones approved for use in PreSet hubs. Non-approved bearings could result in excessive preload or endplay.

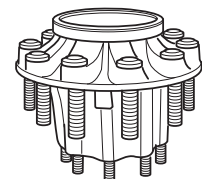


Figure 3

⚠ WARNING

When using an oil bath system, do not pack the bearing with grease. Grease will prevent the proper circulation of axle lubricant and can cause premature wheel seal and bearing failure.

4. Ensure the hub seal bore is free of rust, dirt, scratches and sharp edges.

NOTE

Do not apply any gasket sealant to the seal outer or inner diameter.

5. Position the seal into the hub bore with the "AIR SIDE" visible. Use the appropriate ConMet installation plate (see chart below) and a generic seal tool handle or a flat plate and small mallet to hammer seal into place. Do not hammer directly on the seal. Make sure the seal is uniformly bottomed out in the bore. (see Figure 4). Check to be certain the seal is not cocked and that the seal inner diameter and the inner bearing turn freely.

ConMet Seal Installation Plates

Axle Type	Part Number
FF Steer	10084010
FL Steer	10084011
R Drive	10084012
TN Trailer	10084013
TP Trailer	10084013

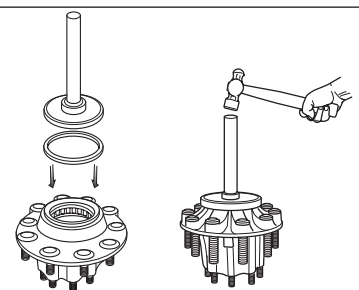


Figure 4

6. Turn the hub over, and place it seal-end down. Place the bearing spacer in the hub cavity ensuring that the small end, if present, faces the outboard end of the hub (see Figure 5).

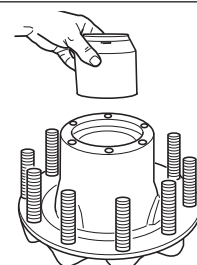


Figure 5

7. Lubricate the outer bearing cone with the same lubricant as will be used in the hub and install it into the hub assembly (see Figure 6).

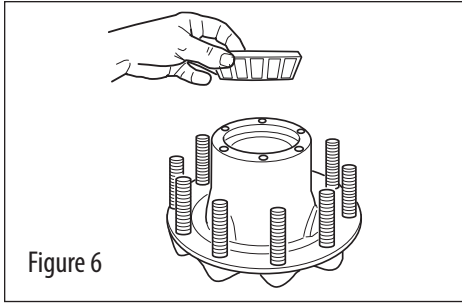


Figure 6

Reinstallation

⚠ WARNING

Never support the hub on the spindle with just the inner bearing and seal. This can damage the seal by cocking the seal in the seal bore and can lead to seal failure and loss of a wheel, creating a risk of serious bodily injury.

1. Clean the spindle to remove any lubricant, corrosion prevention coating, foreign material, or surface rust that may be present.

2. Lubricate the bearing journals on the spindle, or the inside diameter of the bearing cones with Grade 2 grease or the lubricant that will be used in the wheel end. Do not coat the seal journal on the spindle.

3. Lubricate the inner diameter of the seal with a light film of the same type of lubricant as will be used in the hub.

⚠ CAUTION

Failure to lubricate the inner diameter of the seal may result in premature seal failure.

4. For hubs equipped with the integrated PreSet Plus spindle nut, skip to next section titled PreSet Plus Spindle Nut Installation. For traditional PreSet hubs, mount the hub assembly onto the axle spindle with a smooth, firm motion while holding the outer bearing in place. Use care to maintain alignment between the bearing cones, spacer, and spindle and to avoid seal damage.

a. One-Piece Spindle Nut System. For one-piece spindle nut systems, torque the nut to a minimum of 300 ft.-lbs. **DO NOT BACK OFF THE SPINDLE NUT.** Engage any locking device that is part of the spindle nut system. If the locking device cannot be engaged when the nut is at 300 ft.-lbs., **ADVANCE THE NUT UNTIL ENGAGEMENT TAKES PLACE AND THE NUT IS LOCKED.**

b. Double Nut or Jam Nut System. If a double nut or jam nut system is being used, torque the inner nut to 300 ft.-lbs. **DO NOT BACK OFF THE SPINDLE NUT.** Advance the inner nut as necessary to install the locking ring. Install the outer nut with 200 ft.-lbs. of torque. Be sure to engage any secondary locking device.

PreSet Plus Spindle Nut Installation

1. Seat the flat washer into the back of the spindle nut (see Figure 7).

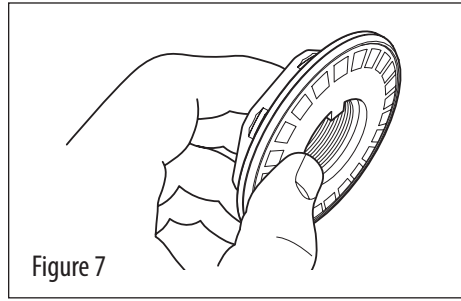


Figure 7

2. Position the spindle nut and washer against the outer bearing (see Figure 8).

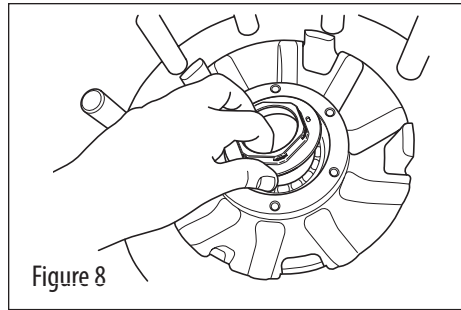


Figure 8

3. Install the spiral snap ring into the snap ring groove in the hub. Make sure that the snap ring is fully seated into the groove in the hub (see Figures 9 & 10)

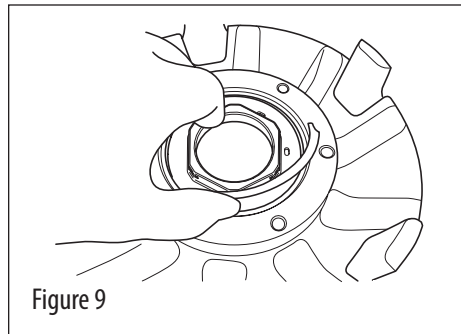


Figure 9

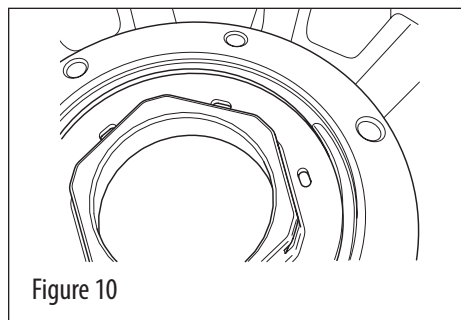


Figure 10

4. If present, remove the red locking snap ring from the spindle nut. Verify that the bearing spacer is in proper alignment. Align the key or flat on the washer with the keyway or flat on the spindle as the hub is placed onto the spindle. Use a smooth firm motion and place the hub onto the spindle. When the threads on the nut engage the threads on the spindle, rotate the nut in a clockwise direction to fully engage the threads.

5. Torque the spindle nut to the following torque values:

a. Steer Hub – Torque the spindle nut to 300 ft.-lbs. while rotating the hub. **DO NOT BACK OFF THE SPINDLE NUT.**

b. Drive or Trailer hub – Torque the spindle nut to 500 ft.-lbs.

while rotating the hub. **DO NOT BACK OFF THE SPINDLE NUT.**

6. Visually examine the three holes in the face of the spindle nut. One of the holes will line up with the holes in the inner washer. Install the tab of the red locking snap ring through the hole in the nut and washer that are aligned. Spread the locking ring, push it over the spindle nut and into the machined grooves in the spindle nut. Use caution not to bend the locking ring permanently.

7. Rotate the hub assembly checking for smooth and free rotation.

⚠ WARNING

Verify the hub will rotate by hand before placing it in service. Some drag is normal for a new seal, but excessive drag or roughness may indicate excessive bearing preload which could result in premature bearing failure. An incorrect combination of parts or the use of one or more non-PreSet parts may cause this condition.

Lubrication

1. Install the hub cap or drive axle with a new gasket. Torque the hub cap bolts in a star pattern to 12 to 18 ft.-lbs. Torque the drive axle bolts or nuts per the drive axle manufacturer's recommendation.

NOTE

Use the proper hubcap for the type of lubricant being used.

⚠ WARNING

Failure to fill the hub with the correct amount of lubricant can cause premature failure of the PreSet hub assembly, which could result in a wheel loss and possible death or serious injury.

2. Drive Hub - Drive hubs can be lubricated by installing one quart of oil through the fill plug in the barrel of the hub. If no fill plug is present, the drive hub can be lubricated by lifting the opposite side of the axle 8 inches to allow the lubricant to run down the axle housing and into the hub assembly. Elevate the axle for two minutes to allow the lubricant time to fill the hub. Repeat the process for the opposite side of the vehicle. The rear axle carrier should be filled to the proper level to ensure adequate lubricant is available to fill the entire hub. Refill the carrier to the proper level after this procedure is completed.

3. Steer and Trailer hubs lubricated with oil -

a. Fill the hub through the hubcap center hole to the "oil level" mark on the face of the cap (see Figure 11).

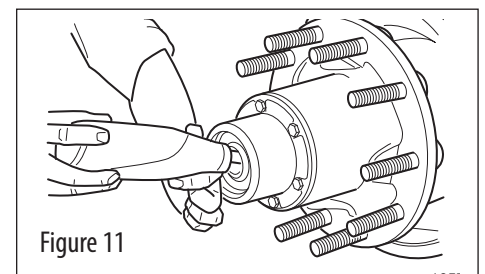


Figure 11

b. Allow oil to settle for ten minutes. Repeat the fill procedure until the oil is at the fill line.

See ConMet service manual recommendations for trailer hubs lubricated with semi-fluid grease. ConMet service manuals can be found online at www.conmet.com.

PreSet Plus® Spindle Nut Kits (kit includes lock ring, nut, washer, and retaining ring)

Part No.	Spindle Nut Assembly Description	Socket Sizes (6 Point)
10036548	FF PreSet Plus Spindle Nut Assy - D Flat (Type Commonly used on Meritor Axles)	2"
10036549	FF PreSet Plus Spindle Nut Assy - Keyway (Type Commonly used on Dana Axles)	2"
10036550	FL PreSet Plus Spindle Nut Assembly	2.75"
10036551	R Drive PreSet Plus Spindle Nut Assembly	3.75"
10036552	TN PreSet Plus Spindle Nut Assembly	3.125"
10036553	TP PreSet Plus Spindle Nut Assembly	4"

PreSet® / PreSet Plus® Hub Service & Rebuild Kits

PreSet / PreSet Plus Hub Seal & Spacer Kits (includes bearing spacer and seal)		Bearing Combination Cross Reference	
Part No.	Application	Inner Cup/Cone	Outer Cup/Cone
10081518	FF Front	HM212011 PS / HM212049 PS	3720 PS / 3782 PS
10081519	FL Front	6420 PS / 6461A PS	552A PS / 555S PS
10081520	R Drive	592A PS / 594A PS	572 PS / 580 PS
10081521	TN Trailer	HM218210 PS / HM218248 PS	HM212011 PS / HM212049 PS
10081522	TP Trailer	HM518410 PS / HM518445 PS	HM518410 PS / HM518445 PS

PreSet / PreSet Plus Hub Rebuild Kits (includes bearings, bearing spacer, and seal)		Bearing Combination Cross Reference	
Part No.	Application	Inner Cup/Cone	Outer Cup/Cone
10081727	FF Front	HM212011 PS / HM212049 PS	3720 PS / 3782 PS
10081728	FL Front	6420 PS / 6461A PS	552A PS / 555S PS
10081729	R Drive	592A PS / 594A PS	572 PS / 580 PS
10081730	TN Trailer	HM218210 PS / HM218248 PS	HM212011 PS / HM212049 PS
10081731	TP Trailer	HM518410 PS / HM518445 PS	HM518410 PS / HM518445 PS

Seal Cross Reference Chart

Position	Spindle Type	ConMet	SKF Classic	SKF Scotseal PlusXL	National Red Series	National Gold Series	Stemco Grit Guard	Stemco Guardian	Stemco Voyager	Stemco Discover	Meritor
Steer	FF Spindle (12,000 lb)	10045885	35066	35058	370001A	380001A	382-8036	308-0836	383-0136	383-0236	MER0236
	FL Spindle (16-20,000 lb)	10045883	43764	43761	370048A	380048A	382-8064	308-0864	383-0164	383-0264	MER0264
Drive	R Spindle (Eaton/Meritor)	10045887	47697	47692/47691	37003A	380003A	392-9131	309-0973	393-0173	393-0273	MER0273
Trailer	TP Spindle	10045889	42623	42627	370065A	380065A	372-7099	307-0723	373-0123	373-0223	MER0223
	TN Spindle	10045888	46305	46300	370025A	380025A	372-7097	307-0743	373-0143	373-0243	MER0243

Bearing Cross Reference Chart

Application (Bearing Cup & Cone)	Set No.	ConMet Set No.	ConMet Cup / Cone No.	Hyatt Cup / Cone No.	Timken Cup / Cone No.	Timken 454 Set No.	Timken 454 Cup / Cone No.
FF Steer Axle / Inner	SET427	10041905	HM212011 PS / HM212049 PS	HM212011-04 or PS / HM212049-04 or PS	NP026773 / NP899357	SET603	NP454773 / NP454357
FF Steer Axle / Outer	SET428	10041906	3720 PS / 3782 PS	3720-04 or PS / 3782-04 or PS	NP435398 / NP874005	SET605	NP454398 / NP454005
FL Steer Axle / Inner	SET445	10041925	6420 PS / 6461A PS	6420-04 or PS / 6461A-04 or PS	NP039695 / NP294109	N/A	N/A
FL Steer Axle / Outer	SET446	10041926	552A PS / 555S PS	552A-04 or PS / 555S-04 or PS	NP183330 / NP107091	N/A	N/A
R Drive Axle / Inner	SET429	10041915	592A PS / 594A PS	592A-04 or PS / 594A-04 or PS	NP363298 / NP034946	SET600	NP454298 / NP454946
R Drive Axle / Outer	SET430	10041916	572 PS / 580 PS	572-04 or PS / 580-04 or PS	NP053874 / NP840302	SET601	NP454874 / NP454302
TN Trailer Axle / Inner	SET431	10041935	HM218210 PS / HM218248 PS	HM218210-04 or PS / HM218248-04 or PS	NP503727 / NP965350	SET602	NP454727 / NP454350
TN Trailer Axle / Outer	SET427	10041905	HM212011 PS / HM212049 PS	HM212011-04 or PS / HM212049-04 or PS	NP026773 / NP899357	SET603	NP454773 / NP454357
TP Trailer Axle / Inner & Outer	SET432	10041945	HM518410 PS / HM518445 PS	HM518410-04 or PS / HM518445-04 or PS	NP593561 / NP174964	SET604	NP454561 / NP454964