

INSTALLATION, MAINTENANCE & SERVICE BULLETIN



This is the condensed version for the PreSet Plus only.
For the complete ConMet Service Manual 10084476,
go to: www.khitch.com.au

INSPECTION

PREVENTATIVE MAINTENANCE SCHEDULE

During any routine preventative maintenance on the vehicle or axle (see your OEM guidelines and associated federal regulations) inspect the following items:

1. Check for loose, damaged or missing fasteners on the wheel and hub cap. Rust or dark streaks coming from the wheel bolts may be a sign of improper wheel bolt torque.
2. Check for loose, damaged or missing hub caps.
3. Check for lubricant leaks at:
 - Hubcap
 - Lube plug in the hub
 - Seal – indicated by lubricant on the hub, brake components or inside of the wheel.
4. Check the lubricant condition. Lubricant that is darkened, milky, shows water in it or has large metallic particles in it is indicative of contamination or a part failure and must be replaced. Contaminated lubricant may be an indication of a leaking seal that should be replaced. Hubs filled with semi-fluid grease, inspect annually or every 160'000km. Remove the hub cap and inspect the lubricant condition. If the lubricant has a dry and caked appearance, remove the wheel end and clean and inspect all the components. Replace damaged or worn components as necessary. Refill the hub with semi-fluid grease. (see page 4 for details).
5. For a proper bearing assessment, lift and support the axle. Rotate the wheel and check if it rotated freely and smoothly. Listen to any sound of rough bearing operation or feel for any vibrations. If in doubt remove the wheels (and the drum) and check it with the hub only. To check the end play, use a dial indicator (-0.001" – 0.006").

Service Interval

Inspection results by the driver (pre-trip, in routes) and the normal preventative maintenance (every 25'000km) will indicate whether further service work is required. Follow the following instructions (and if necessary, check the full ConMet service manual for more details).

Lubrication Analysis

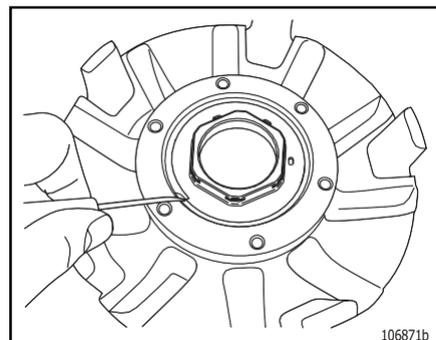
Beyond the recommended visual inspection (also use of a magnet), develop a lubrication testing and replacement program. This program will depend on vehicle application. The lubricant supplier should be consulted for additional lubricant inspection and testing recommendations.

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RECOMMENDED SERVICE

HUB REMOVAL AND DISASSEMBLY

1. Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving.
2. Raise the axle until the tires are off the floor.
3. Place safety stands under the trailer frame or under each axle spring seat.
4. Remove the tire and wheel assembly using procedures specified by the wheel manufacturer.
5. If the axle is equipped with spring brake chambers, carefully compress and lock the springs so that they cannot actuate.
6. For drum brakes, remove the brake drum. Support the drum during the removal process to prevent damage to the components. For disc brakes, remove caliper per manufacturers recommended procedure
7. Place a container under the hubcap, or drive axle shaft for a drive hub, to receive the draining oil, then remove the hubcap or drive axle shaft. Do not reuse the oil. Correctly dispose of the lubricant.
8. Remove the red locking ring. Use caution not to damage the locking ring. Do not remove the spiral snap ring that holds the spindle nut in the hub
9. Use a breaker bar to loosen the spindle nut. PreSet Plus spindle nut installation torque is 300 ft-lbs for steer hubs and 500 ft-lbs for drive and trailer hubs.
10. After the spindle nut is initially loosened with a breaker bar, loosen the spindle nut to remove the hub from the spindle. The internal 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 of the spindle 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.



11. Slide the hub off the spindle. Remove and save the outer bearing cone. Be careful when you remove the hub that you do not damage the outer bearing by dropping it on the floor.
 - If the hub is difficult to remove because the seal is stuck on the spindle, use a mechanical puller to remove the hub.
 - If part of the seal remains on the spindle, carefully remove the part of the seal that remains on the spindle.
12. Place the hub on its outboard end and remove the seal. Retain the seal if it needs to be returned for warranty consideration
13. Remove the inner bearing cone and spacer.

CLEAN AND DRY COMPONENTS

1. Use a clean filtered solvent to clean the hub and all wheel end components
2. Do NOT clean ground or polished parts in a hot solution tank or with water, steam or alkaline solutions. These solutions will cause corrosion of the parts.
3. Clean and inspect the wheel bearing cups and cones, race, spindle bearing and seal journals on the spindle and hub. Bearings should be cleaned with clean filtered solvent and dried with either compressed air or a lint-free rag.

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4. Clean and inspect the spindle. Be sure to clean the full length of the seal journal on the spindle.
5. Parts must be dried immediately after cleaning. Dry parts with clean paper towels or rags, or compressed air. Do not dry bearings by spinning with compressed air.
6. Apply a light oil to cleaned and dried parts that are not damaged and are to be immediately assembled. Use only the type of oil used by the manufacturer. Do NOT apply oil to the brake linings or the brake drums.
7. If the parts are to be stored, apply a good corrosion preventative to all surfaces. Do NOT apply the material to the brake linings or the brake drums. Store the parts inside special paper or other material that prevents corrosion.

INSPECTING BEARING CUPS, CONES AND BEARING SPACER

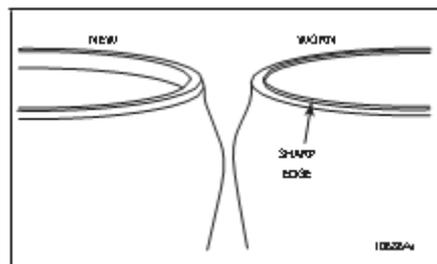
1. After components have been properly cleaned, visually inspect the cups, cones and spacer for any wear or damage.

Reference materials for proper bearing inspection procedures are available from the bearing manufacturers.

Bearing spacers should be visually inspected for signs of wear or damage. Carefully inspect the machined ends of the bearing spacer.

Wear to the bearing spacer can appear as a sharp ring of standing metal at either edge of the machined surfaces.

Replace the spacer if it has visible wear evidenced by a raised edge on the machined end.



REASSEMBLY

HUB, CUPS, CONES & SPACER

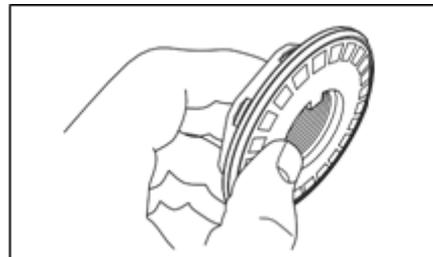
1. Place the hub, seal end up, on a clean work bench surface.
2. Lubricate the inner bearing cone with the same lubricant as will be used in the hub and install it into the inner bearing cup
3. Position the seal into the hub bore. Use a ConMet seal installation tool or flat plate and a small mallet to install the seal.
4. When installing the ConMet seal, tap the adapter plate of the installation tool around the outer edge to position the seal. Drive the wheel seal into place (see figure 79). Once the tool bottoms out, the seal is installed correctly.
5. Check to be certain the seal is not cocked and that the seal inner diameter and the inner bearing turn freely.
6. Lubricate the inner diameter of the seal with a light film of the same lubricant as will be used in the hub.
7. Turn the hub over, and place it seal end down. For all drive and trailer hubs, install a bearing spacer. If the spacer has a tapered end, it should face towards the outboard end of the hub.
8. Lubricate the outer bearing cone with the same lubricant as will be used in the hub and install it into the hub assembly.

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SPINDLE NUT AND SPIRAL RING

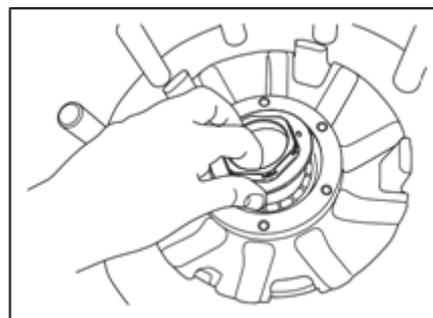
1. Seat the flat washer into the back of the spindle nut.

Seating Flat Washer into Spindle Nut

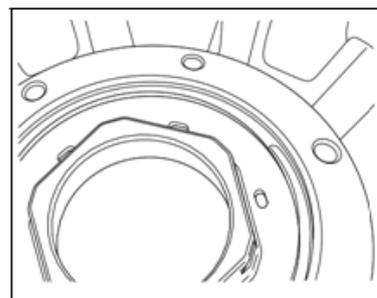
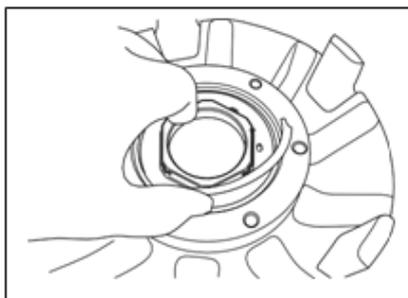


2. Position the spindle nut and washer against the outer bearing.

Positioning Nut and Washer against Bearing



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.



HUB ASSEMBLY BACK ON TO THE AXLE

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 inside diameter of the seal with the same lubricant that will be used in the wheel end.
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:

Trailer Hub – Torque the spindle nut to **500 ft-lbs while rotating the hub.**
DO NOT BACK OFF THE SPINDLE NUT.

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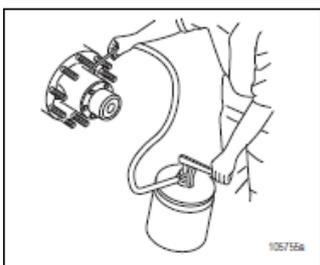
6. Visually examine the three holes in the face of the spindle nut. One of the holes will line up with the holes in the inner washer. Install the tab of the red locking snap ring through the hole in the nut and washer that are aligned. Spread the locking ring, push it over the spindle nut and in to the machined grooves in the spindle nut. Use caution not to bend the locking ring permanently. If the locking ring is damaged or bent, replace it with a new one.
7. 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.

LUBRICATION

TRAILER HUBS WITH SEMI-FLUID GREASE

Hubs are factory filled with: **Mobilith SHC 007** (Mobil). Check ConMet Bulletin #10009945 for alternative lube.

1. Remove the fill hole plug. (wheels must be removed)
2. Loosen the hubcap bolts to allow air to escape while the hub is filling.
3. Fill the hub with the above recommended lube to the recommend volume (see table below).



Part number:
133680-1L
(1lt)

4. Retorque the hubcap bolts to 12-18ft-lbs in a star pattern.
5. Reinstall and tighten the fill plug to 20-25 ft-lbs.

RECOMMENDED FILL VOLUMES FOR SEMI-FLUID GREASE

Axle Model	Hub Type	Material	Brake Type	Casting Number	No. Of Studs	Volume per Hub (Liter)
KF22	TP	Aluminum	Drum	10033028 10086499	10	1.22
		Iron		10033241 10083939	10	1.03
Aluminum		Disc	10016225	10	1.22	
Iron			10083549	10	1.62	
KF67			Drum	10025633	10	1.03
KF22	TN	Iron	Drum	10033293 10083937	10	0.680

*Hub casting numbers can be found cast onto the flange of the hub. For part numbers that don't appear in the chart, contact FKH.
**These fill volumes were established with ConMet hubcaps and are to be used as reference only.
(1FL.OZ. = 0.0295735lt)

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For general FKH axle maintenance: **KPM-004-0310**

