

# INSTALL INSTRUCTIONS



## TRAIL SAFE™ KNUCKLE BALL WIPER SEAL

140327-1-K

### KIT CONTENTS

**2 ct.**

Trail Safe™ Seals



**4 ct.**

Rock Rings



**16 ct.**

Rock Ring Bolts, Lock Washers





## RECOMMENDED TOOLS

3/8" Ratchet  
Small Screwdriver

**Sockets**  
10mm

## CAUTION

1. Read all instructions completely and carefully before you begin.
2. Check to make sure the kit is complete and that no parts are missing (refer to the Kit Contents List on the first page of these instructions). If anything is missing, please contact Trail-Gear at 559.252.4950.
3. Park vehicle on a clean, dry, flat, level surface and block the tires so the vehicle can not roll in either direction.

# INSTALL INSTRUCTIONS (CONT'D.)



## STEP 1

Lightly grease or lubricate seal.



## STEP 2

The side of the seal with the 4 casting dots, as shown below, faces the 3rd member when installed.



## STEP 3

The side of the seal with the writing on it, as shown below, faces the tire when installed.



## STEP 4

Fold seal under on itself like shown in the picture.



## STEP 5

Place folded portion of the seal in the bottom groove of the knuckle ball like shown below.



## STEP 6

Pull seal up towards the top of the knuckle ball like shown below.



# INSTALL INSTRUCTIONS (CONT'D.)



## STEP 7

Work the seal up towards the top of the knuckle ball equally with both hands until seal is tight.



## STEP 8

Using a small screwdriver or pry tool, place it between the seal and the top of the knuckle ball and gently pry back to pop the seal onto the knuckle ball. Use caution not to damage the seal or the surface of the knuckle ball with the pry tool.



## STEP 8 CONT'D



## STEP 9

Now that the seal has been placed on the knuckle ball, smooth the seal out, making sure that there are no kinks or dents in the seal.



## STEP 10

Place the one-piece metal retaining ring on the knuckle ball.



## STEP 11

Reinstall steering knuckle on the knuckle ball. Note: We will not be using the OEM felt or the OEM rubber gasket.



# INSTALL INSTRUCTIONS (CONT'D.)



## STEP 12

Install the one-piece metal retaining ring into the slot on the back of the knuckle.



## STEP 13

Install the Trail Safe™ Knuckle Ball Wiper Seal over the one-piece metal retaining ring, trapping the ring in between the knuckle and the seal.



## STEP 14

Install your Rock Rings over the Trail Safe™ Knuckle Ball Wiper Seal using the provided hardware.



## STEP 15

When complete, your knuckle ball should look like this.

