

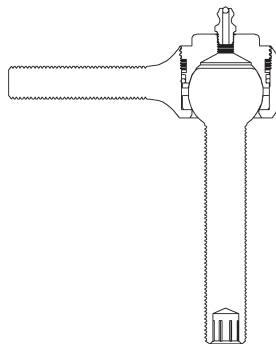
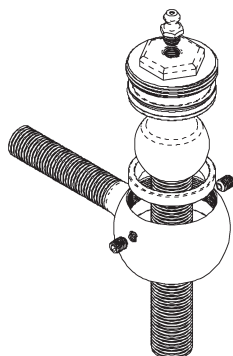


PHONE: (989) 435-7080

3195 LYLE ROAD • BEAVERTON, MI 48612
www.howeracing.com

FAX TOLL FREE: (888) 484-3946

HOWE QUICK BUMP TIE ROD END MAINTENANCE INSTRUCTIONS



Howe PN	Housing Style	Stud Style	Housing #	Stud #
23385	5/8"x18 LH Thread	1.50" (short, rack end)	23247	23297
23286	5/8"x18 RH Thread	3.00" (long, spindle end)	23248	23298

Common Parts: Grease Zerk **22328**, Set Screw **22325**, Cap **23241**, O-ring **23242**, Race **23243**

ATTENTION!: The jam nut must be seated against a flat surface to hold. Rounded rack shafts will require modification or loctite to prevent the quick bump end from working loose.

Installation

- 1) Assembled quick bump tie rod ends are shipped from Howe Racing Enterprises internally lubricated, adjusted and ready to install.
- 2) Apply Anti-Seize to the threads of the quick bump housing.
- 3) Run a jam nut onto the threaded end of the housing.
- 4) Install the quick bump end into the sleeve adjusting it to the desired position and then lock it in place with the jam nut.
- 5) Apply anti-seize to the threaded stud before installing into the spindle or rack to avoid galling on installation. Do not apply excessive torque when installing the threaded stud into the spindle. Threaded sleeve on spindle may need tapped for smooth installation.

Adjusting Bump Steer

- 1) Loosen the jam nut on the threaded stud.
- 2) Using a 3/8" allen wrench turn the stud to move the quick bump end up or down as needed. Each turn is equal to .010".
- 3) When the desired setting is achieved hold the stud with the allen wrench and tighten the jam nut.

Disconnecting from the Spindle or Rack

- 1) Place a jack stand under the lower A Frame for support.
- 2) Make sure the A Frame is near level and the threaded stud is centered in the housing. Then loosen jam nut.
- 3) Using a 3/8" allen wrench remove the threaded stud from the spindle or rack. Be sure the stud does not misalign so far that it begins to bind during removal.

Maintenance

Grease after every 300 to 400 laps with low friction grease. We use Citgo MP Lithoplex 3 or Red Line CV2. A Howe quick bump end will only accept grease until it is full (typically, one pump or less is required). Once the grease passages are full they will not vent, the pressure from the grease gun can make it difficult to remove it from the zerk. To relieve the pressure work the threaded

stud around to vent grease onto the ball, if the quick bump end is on the vehicle, turn the steering back and forth for the same result. Disassemble annually or every 2000 laps to adjust the lash.

Adjusting the Lash on the Car

Lash can be set with the quick bump end attached to the car if the stud is free from the spindle or rack. Tighten the cap until it is snug. Then loosen the cap 1/8 turn to set the lash.

Disassembly

- 1) Use a 3/32" allen wrench to remove the setscrews from the tie rod housing.
- 2) With a 7/8" socket turn the cap counterclockwise to remove.
- 3) Clean moving parts to inspect for excessive wear. Replace any parts that are worn or damaged. The quick bump stud is concentric and should be checked for straightness. Install the quick bump stud upside down in the housing and spin the stud against the side of the housing with your fingers. If the quick bump stud is bent, you will see it wobble.

Assembly & Lash

- 1) Install the quick bump end housing into a threaded sleeve and gently clamp the sleeve in a vise.
- 2) Install the race into the housing ungreased and push it down completely.
- 3) Install the threaded stud into the housing without grease.
- 4) Install the o-ring on to the cap by pushing it down to the first groove on the cap.
- 5) Dip the bottom lip of the cap in grease and apply a small amount to the threads of the cap and around the o-ring, install and tighten the cap until it snugs down.
- 6) Set the lash on the ball by loosening the cap 1/8 turn.
- 7) Install the setscrews into the housing and tighten them evenly.
- 8) Using a grease gun, grease and rotate the tie rod stud by hand until the grease is visible on the bottom of the ball.