

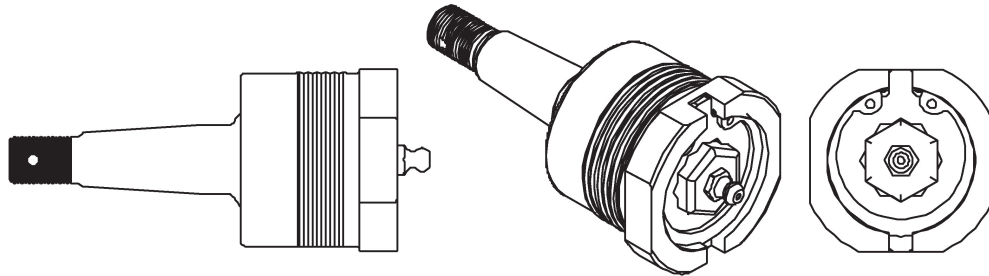


PHONE: (989) 435-7080

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

FAX TOLL FREE: (888) 484-3946

HOWE EXTREME DUTY PRECISION BALL JOINT MAINTENANCE



Howe Part #	Moog Part #	Style	Make	Stock Application	Racing Application	Stud	Snap Ring	Retainer Plate
22320X	K772	Screw In	Chrysler	65-89 Chrysler, Dodge, Plymouth	Howe, Finishline, Lefthander, AFCO, Port City, Dirtworks screw in uppers, Troyer Ford steering uppers. Also fits Pinto taper.	22330	22312	22311
22412X	K727	Screw In	Chrysler	60-66 Imperial	Large Taper LM, fits nearly all strut cars	22440HM	22428	22427

Warning! Do not use a 3/4" socket or wrench on the adjuster cap to install the ball joint, use only a ball joint socket! The 3/4" hex is for removing and replacing the cap only and is not meant to withstand additional torque. *Be certain that the spindle has the proper taper to match the taper of the ball stud! Improperly seated studs can become damaged to the point of failure!*

Installation - Screw In

- 1) Assembled ball joints are shipped from Howe Racing Enterprises internally lubricated, adjusted and ready to install.
- 2) Apply Anti-Seize to the threads of the Housing.
- 3) Install the ball joint in the upper a-frame and torque to 100 ft. lb. clockwise using a ball joint socket.

Connecting to the Spindle

Make sure that the stud is in contact with the spindle from top to bottom. If the taper is larger than the stud it will appear to be tight but will have a gap at the large end and will eventually break.

Disconnecting from the Spindle

- 1) Remove the spring and shock.
- 2) Place a jack stand under the lower a-frame for support.
- 3) Make sure the a-frame is near level and the taper of the ball joint is centered in the housing.
- 4) Use a pickle fork to push evenly on both sides of the housing until the taper is free from the spindle.
- 5) The taper of a Howe ball joint is more precise than other ball joints, which can cause it to be more difficult to remove. Difficult tapers may be separated from the spindle by wedging a pickle fork between the ball joint and the spindle to hold pressure, and then apply heat to the tapered area of the spindle until they separate.

Removing from the A-frame - Screw In

Unscrew the housing from the a-frame using a ball joint socket to turn the ball joint counter clockwise.

Maintenance

Grease after every 300 to 400 laps with low friction grease. We use Citgo MP Lithoplex 3 or Red Line CV2. Unlike conventional ball joints, a Howe ball joint 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 the gun from the zerk. To relieve the pressure work the ball stud around to vent grease onto the ball, if the ball joint is on the vehicle, bounce the suspension for the same result. Disassemble annually or every 2000 laps to adjust the lash.

Adjusting the Lash

Lash can be set with the a-frame attached to the car if the spring is unloaded and the ball joint taper is free from the spindle. If you choose to remove the ball joint from the a-frame, gently clamp the housing by the flat sides in a vise to disassemble.

Disassembly

- 1) Using a pair of snap ring pliers remove the retainer ring and then the hex retainer plate.
- 2) Turn adjuster cap counterclockwise to remove, use a 3/4" socket or wrench if necessary.
- 3) Clean moving parts to inspect for excessive wear. Replace any parts that are worn or damaged. The ball stud is concentric and should be checked for straightness. Install the ball stud upside down in the housing and spin the stud against the side of the housing with your fingers. If the ball stud is bent, you will see it wobble.

Assembly

- 1) Install the housing into the a-frame or gently clamp the housing by the flats into a vise.
- 2) Install the ball stud into the housing without grease.
- 3) Apply a small amount of light lubricant to the threads of the cap, install and tighten until it contacts the top of the ball.
- 4) Set the lash on the ball by loosening the cap 1/8 turn.
- 5) Place the hex retainer plate on, adjust the cap slightly as needed, so the retainer locks the cap in place. Install the retainer ring using snap ring pliers.
- 6) Using a grease gun, grease and rotate the ball stud by hand until the grease is visible on the bottom of the ball.