



# Low Profile Ball Vise

For Engraving and Jewelry Making

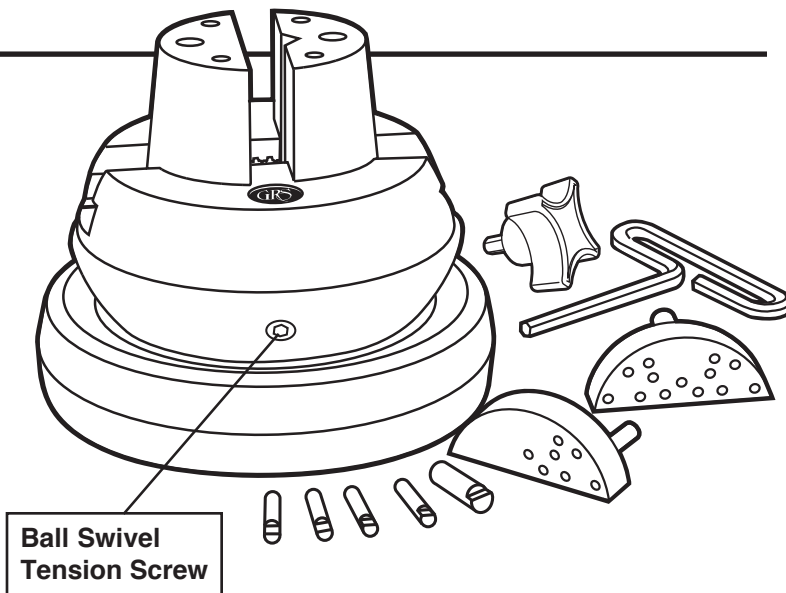
INSTRUCTIONS • #003-615

The GRS Low Profile Ball Vise will provide many years of trouble-free service. It is extremely rugged in construction, yet is relatively simple and easy to maintain. Required lubrication is minimal.

The jaw adapter plates are drilled to accept engraving block attachments. GRS offers a 30-piece attachment set (#003-520) that includes storage for the adapter plates and pins that come with the block.

## Maintenance

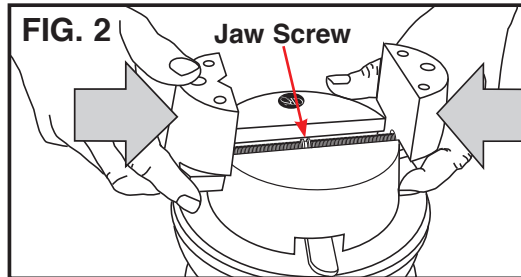
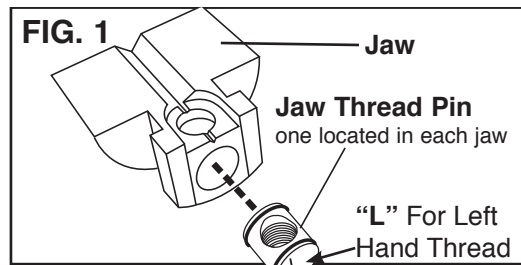
Based on usage, open jaws fully and clean the dirt and metal pieces from the threads. After cleaning, apply a small amount of light oil to the threads. To disassemble, remove the Ball Swivel Tension Screw and Spring from the side of the ball. Grasp the Crown Assembly and carefully lift the Crown.



## Vise Jaw Thread Replacement • #003-627 & #003-628

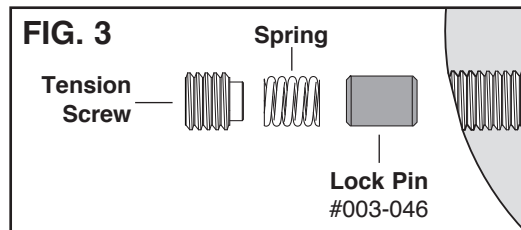
Overtightening the jaws will cause wear and damage to the threads. If jaws become loose, replace with kit #003-627. Remove the jaws by opening them as wide as possible until they come off the end of the jaw screw (**FIG. 1**). The jaw thread pin is located on the underside of each jaw. **NOTE:** Before removing pins, locate the one with the “L”. This is the left hand thread pin and will need to be replaced with the same. Apply a small amount of grease (included in kit) to the O-rings and jaw screw before installing them. Lift the jaw screw out of the yoke and replace it. Note which side the left hand thread is on. Grease the threads and yoke well.

Start the jaw threads at the same time when replacing them (**FIG. 2**). Hold each jaw in position and turn the jaw screw to close them. Either a large rubber band or a second person is useful to hold the jaws against the thread while the jaw screw is turned. If the jaws don't meet at the same time in the center, remove them and try starting the threads at the same time again.



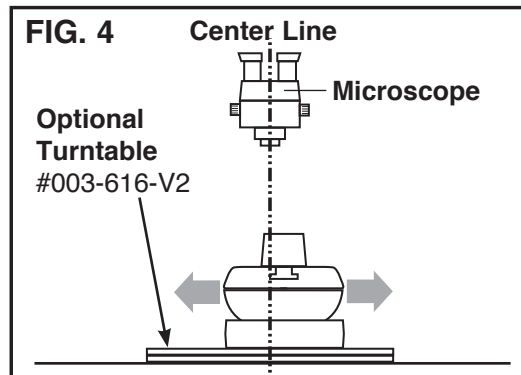
## Rotational Lock Replacement

The LOCK or DRAG PIN is subject to wear and may need replacement after extended use. Simply remove the ball swivel tension screw with the hex wrench. The Spring and Lock Pin should follow (**FIG. 3**). If not, turn the ball until they fall out. Replace the Lock Pin (#003-046), Spring, and Tension Screw.



## Turntable Base For Microscope Work • #003-616-V2

To use the Turntable Base, lock the vise by tightening the swivel tension screw until the ball will not turn. The turntable now becomes the means of rotation, allowing the work to be centered in the field of view of the microscope. Align the center of the turntable with the center of the microscope view (**FIG. 4**). Change working views by repositioning the vise.



## Thread Pin Replacement Kit • #003-627

Includes Jaw Screw, Left and Right Thread Pins, O-Rings, and Tube of Grease.

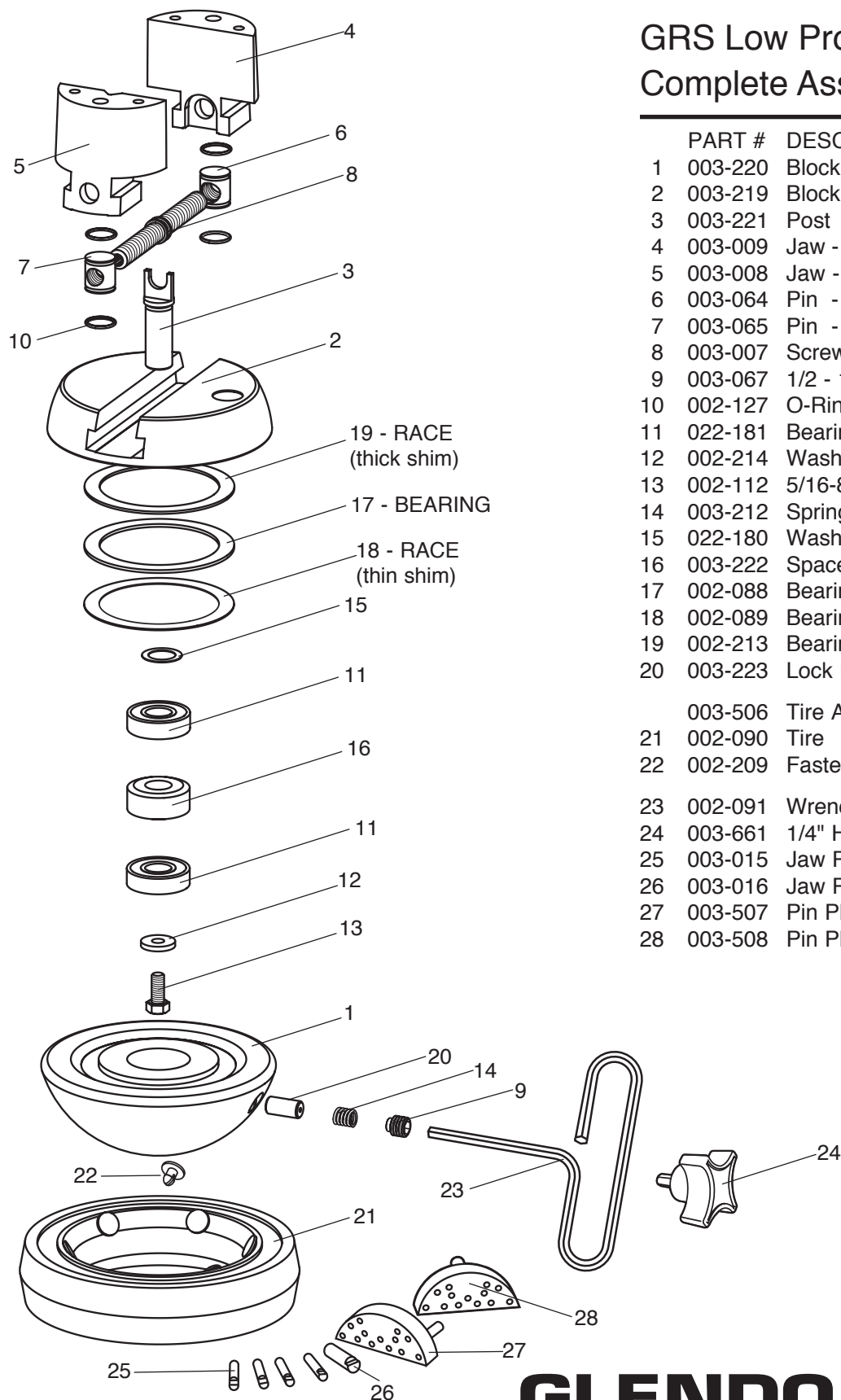


# Low Profile Ball Vice

For Engraving and Jewelry Making

PARTS LIST • #003-615

## GRS Low Profile Ball Vice Complete Assembly #003-615



PART #	DESCRIPTION
1	003-220 Block Base
2	003-219 Block Crown
3	003-221 Post
4	003-009 Jaw - Right Hand
5	003-008 Jaw - Left Hand
6	003-064 Pin - Left Hand
7	003-065 Pin - Right Hand
8	003-007 Screw Post
9	003-067 1/2 - 13 x 1/2 SSS Fit Pt HF Dog
10	002-127 O-Ring - 0.625" x 0.75" x 0.062"
11	022-181 Bearing 6203ZZ
12	002-214 Washer - 0.312" x 0.859" x 0.125"
13	002-112 5/16-8 x 3/4" HHB Z/P
14	003-212 Spring
15	022-180 Washer
16	003-222 Spacer
17	002-088 Bearing 3" x 3.75" x 0.078"
18	002-089 Bearing 3" x 3.75" x 0.031" Race
19	002-213 Bearing 3" x 3.75" x 0.062" Race
20	003-223 Lock Pin
	003-506 Tire Assembly ( 21 & 22)
21	002-090 Tire
22	002-209 Fastener - Push-In
23	002-091 Wrench - 1/4" T-Handle Hex
24	003-661 1/4" Hex Drive Knob
25	003-015 Jaw Pin - 1/4"
26	003-016 Jaw Pin - 3/8"
27	003-507 Pin Plate - 2 pin
28	003-508 Pin Plate - 1 pin

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