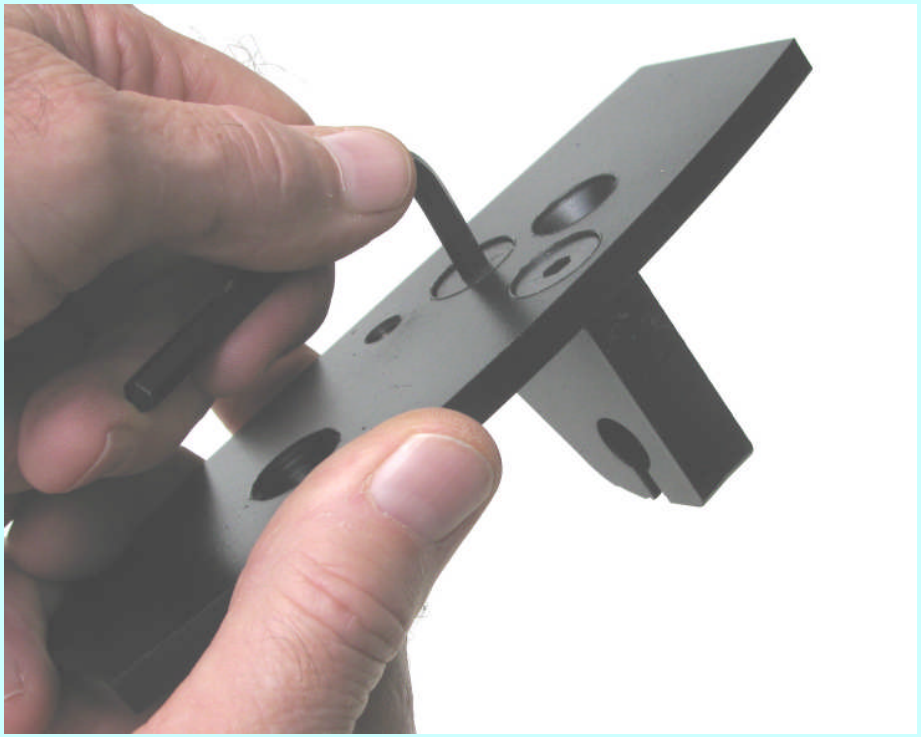
Geiger's

Tru N Dress *Grand Slam*

and Crowning Tool Rest

Instructions Manual



9/2014

Geiger's Tru N Dress Grand Slam is a 3rd generation product. It is designed to reduce vibration in two wheel bench grinders by correcting eccentricities in the circumference of the wheels, making them concentric to the axle, as they are mounted.

The original Tru N Dress, introduced in 2006, and the two subsequent models, have proven to provide the following benefits:

- Reduction of grinder vibration
- Elimination of tool bounce
- Improvement of tool sharpness
- Improvement of tool bevels
- Production of a perfectly flat surface on grinding wheels

In addition to these benefits,Geiger’s Tru N Dress Grand Slam, used in conjunction with the Crowning Tool Rest, can produce a slight crown on the surfaces of grinding wheels.

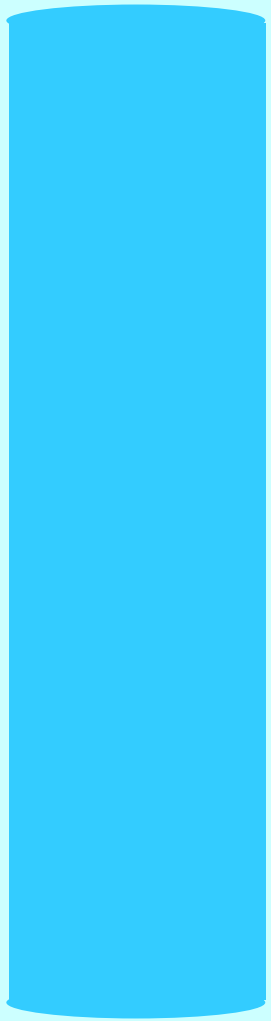


Table of Contents

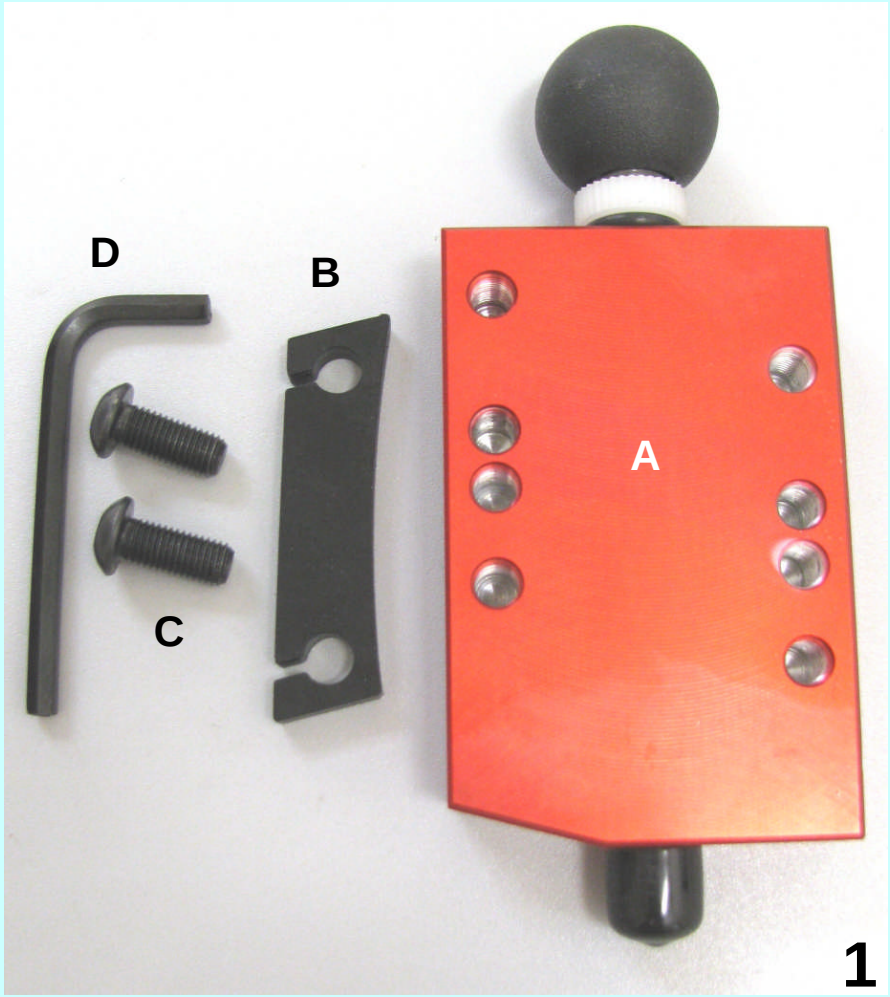
Tru N Dress *Grand Slam* Parts Identification

A) Main body with round diamond positioning knob

B) Edge guide (two-sided)

C) Two button head screws

D) Hex wrench



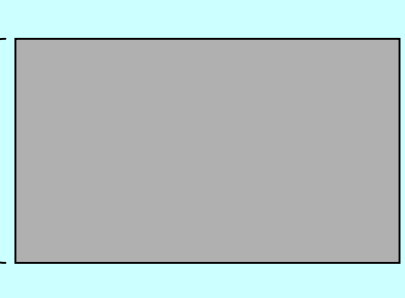
Tru N Dress *Grand Slam*

Positioning the Edge Guide

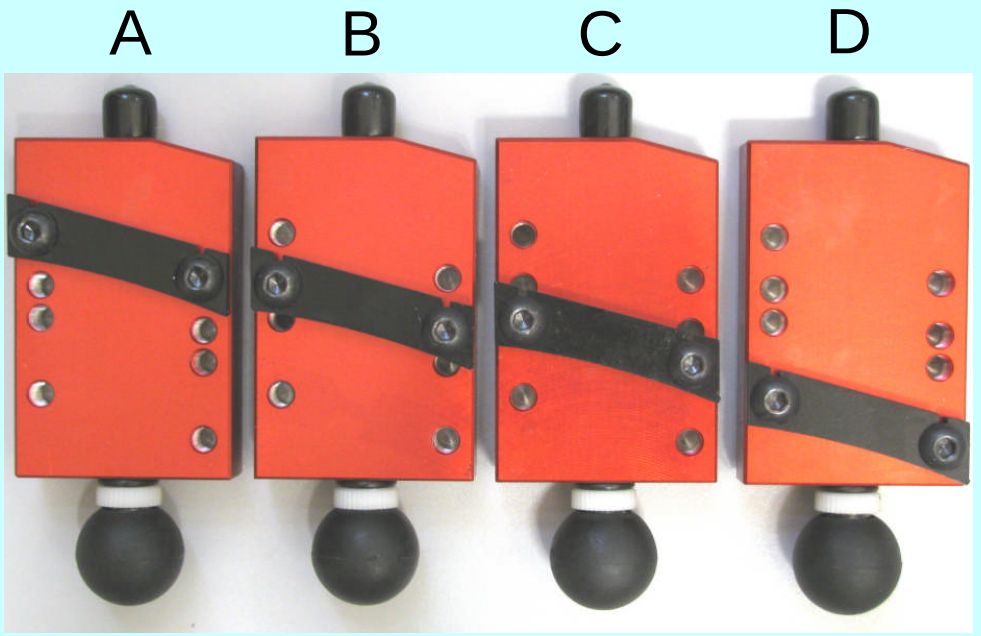
There are four positions the edge guide can be mounted on the bottom of the body. This enables the system to work on various tool rests sizes from: 1” to 3-3/16” (measured front to back).

Select a position closest to your tool rest size:

A: 1”
B: 1.5”
C: 2”
*D: 3”



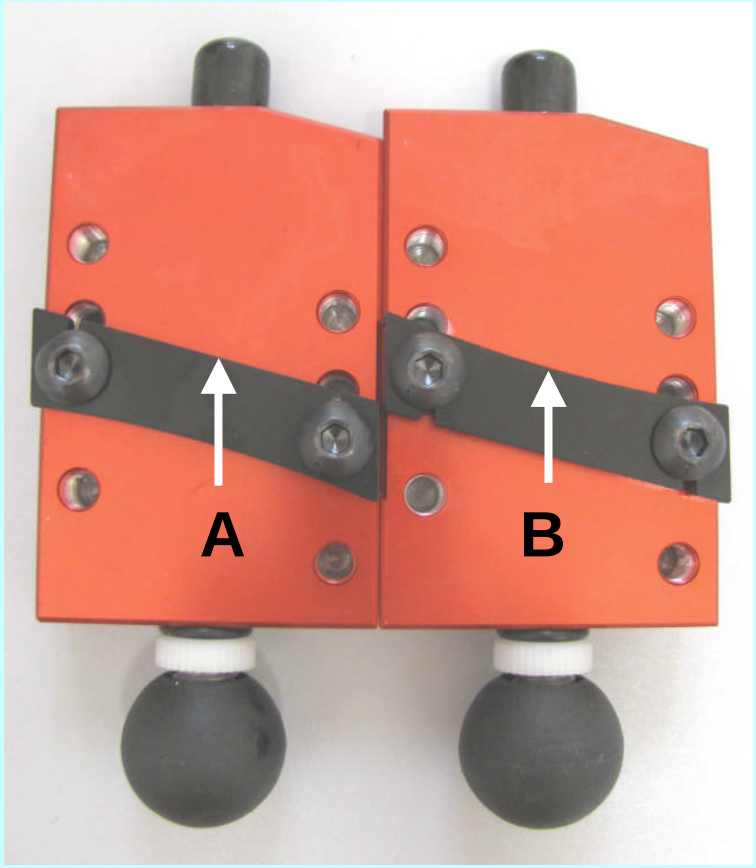
Your Tool Rest

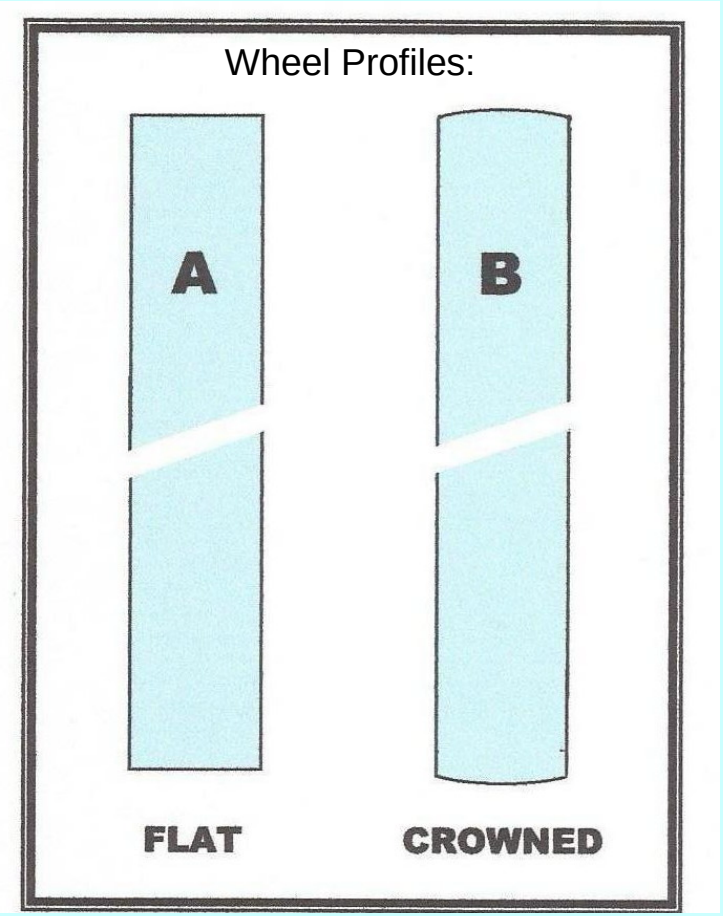


* “D” is the position to use for Wolverine system tool rests.

Selecting an Edge Guide Position cont'd.

The edge guide is two sided. One side is straight and the other has a concave radius.





Face the straight side of the edge guide toward the diamond for "A", a flat surface on the wheel.

Face the concave radius side of the edge guide toward the diamond for "B", a crowned surface on the wheel. It is necessary to use the TND Grand Slam in conjunction with our Crowning Tool Rest to produce a crowned surface.

Tool Rest Preparation

The TND Grand Slam needs to be able to slide back and forth on your tool rest unimpeded.

Producing a slight chamfer on this edge of your tool rest will improve the performance of the wheel dresser.

1) **Inspect the edge of your tool rest facing you for any nicks or bumps that might impede the traverse of the wheel dresser.**

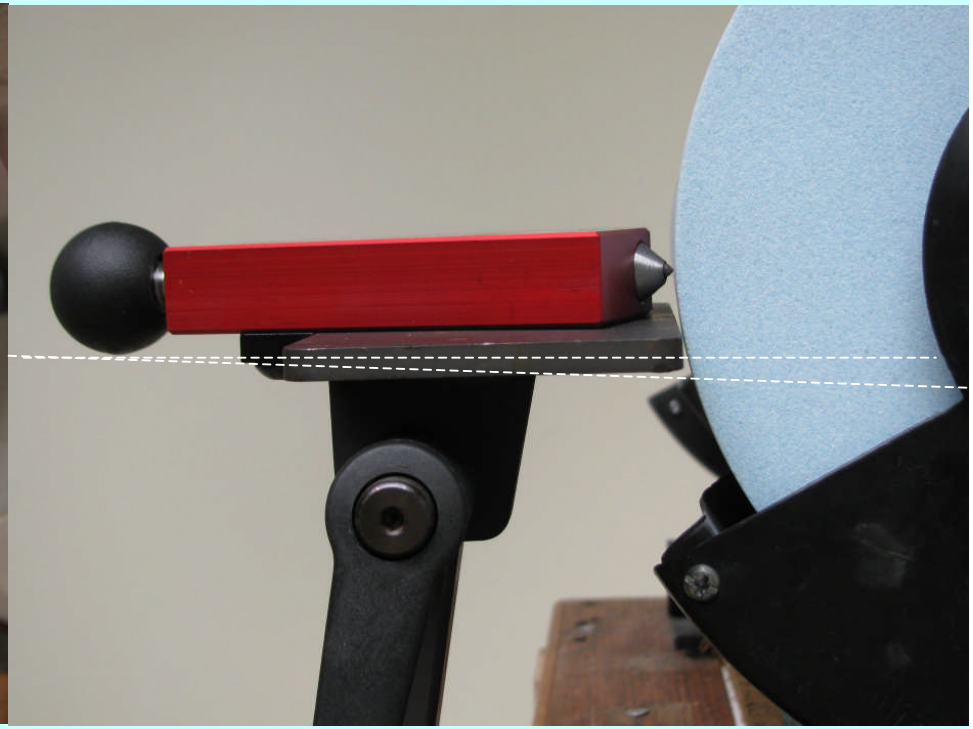
2) **Inspect the top of your tool rest for any bumps that might impede the traverse of the wheel dresser.**

3) **Use a file or sand paper to improve the condition of the edge and top surface of your tool rest before starting to dress the wheel.**

TIP: To get maximum results, the tool rest needs to be stable.

Tool Rest Position

Notice how the diamond shaft has been retracted into the body. This is the position in which it should be used.



Once you have selected a position for the edge guide and secured it to the body, position the tool rest close to the wheel, but not so close that it touches and adjust the angle so that the top is level or angling slightly downward as shown in the above photos.

DOUBLE CHECK TO MAKE SURE THE TOOL REST IS SECURED IN POSITION!

Never dress the wheels with the tool rest angled upward.

Dressing the Wheel

1) **Retract the diamond to a position similar to the one in the photo above.**

2) **<u>Put on an ANSI approved dust mask and face shield</u>.**

3) **WITH THE GRINDER OFF: Slide the dresser across the rest and adjust the position of the diamond by rotating the control knob until the diamond barely touches the surface.**

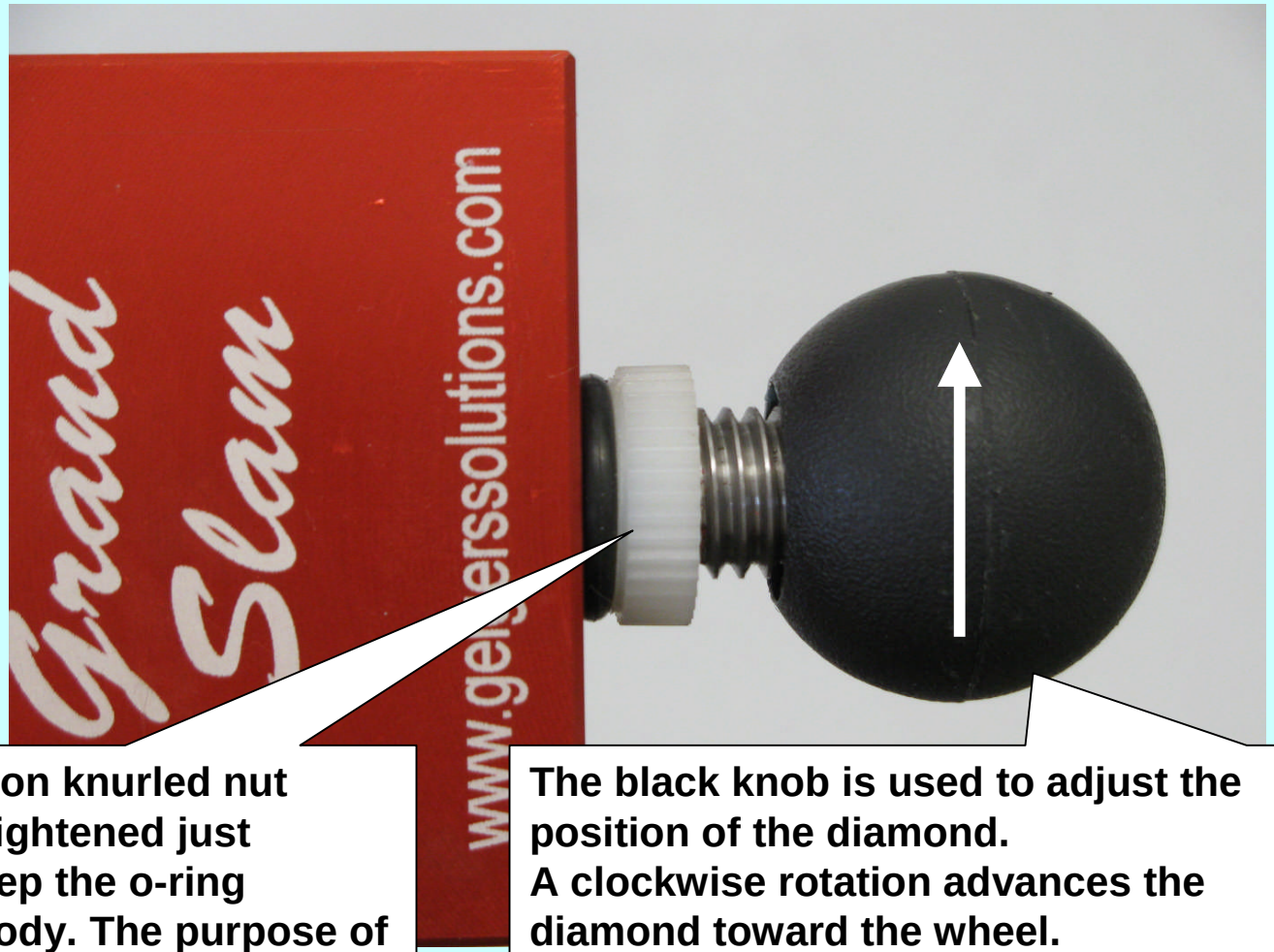
4) **Move the dresser out of the way and start the grinder.**

5) **Slide the dresser across the width of the wheel with even strokes about 6 times before re-adjusting the position of the diamond.**

Only a light touch is required to operate the TND Grand Slam

Move the TND Grand Slam back and forth across the wheel in smooth, even strokes.

Adjusting the Diamond



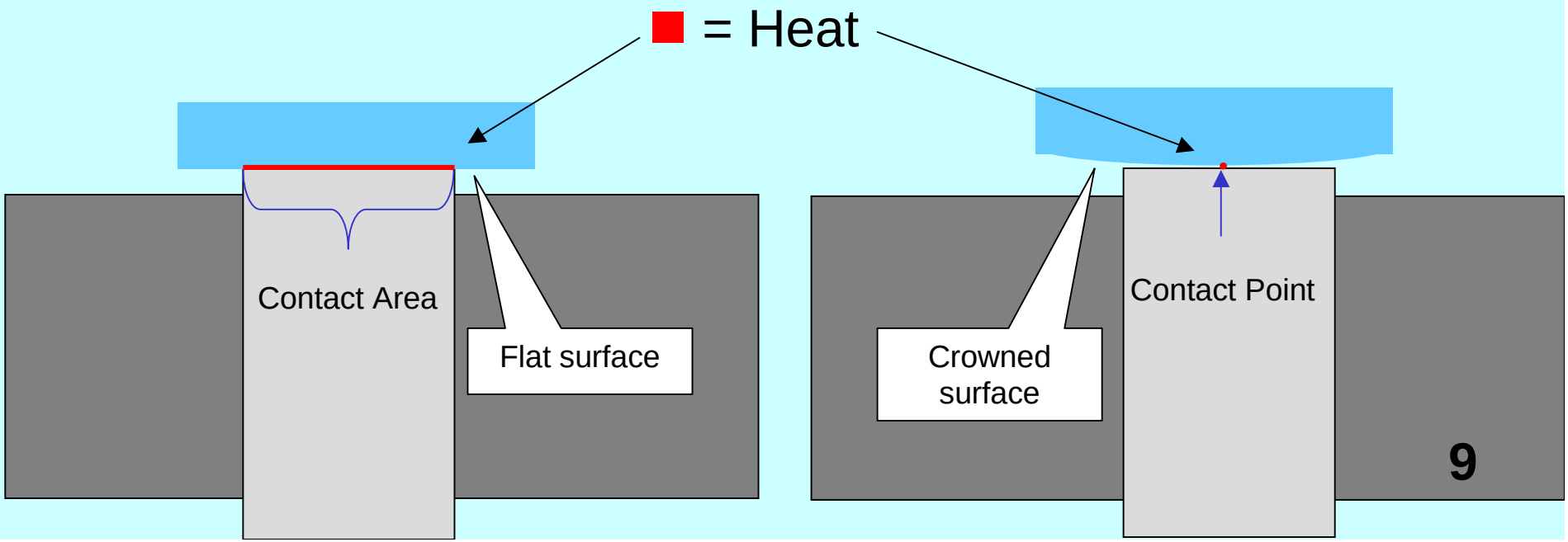
The white nylon knurled nut needs to be tightened just enough to keep the o-ring against the body. The purpose of these is to keep dust out of the threads in the body.

The black knob is used to adjust the position of the diamond.
A clockwise rotation advances the diamond toward the wheel.
Make very slight adjustments so only small amounts of material are removed from the wheel.

Choosing a Wheel Profile

From 2006 through 2014 I provided a Tru N Dress that only produced a flat surface to the wheel. More recently, having learned more about the advantages of having a crowned surface on the wheel, I redesigned the system in so it can do either. The system with dual capability is the Tru N Dress Grand Slam that was introduced in September 2014. The Tru N Dress Grand Slam is a 3rd generation product.

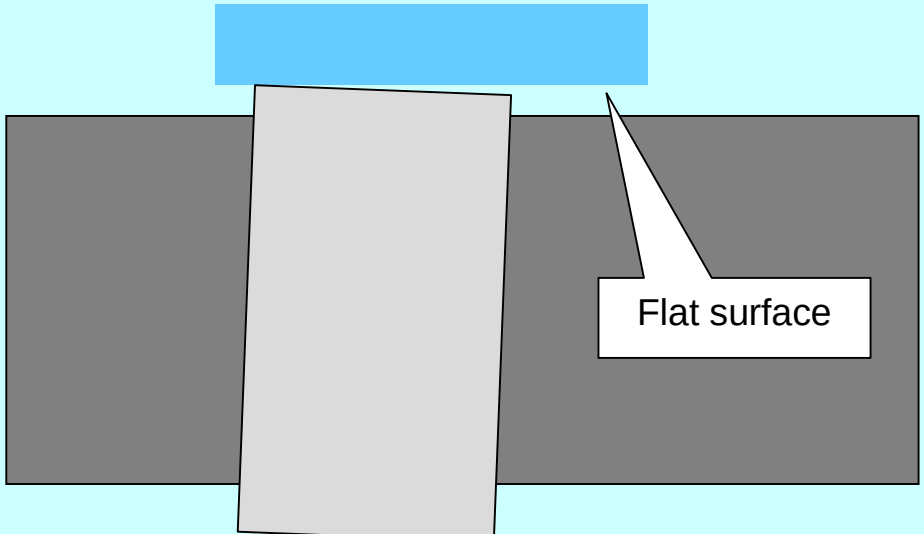
Using a crowned wheel is sometimes referred to as "cool grinding". Because only a small portion of a tool is in contact with the wheel at any given time, there is less heat produced. This is a tremendous advantage when grinding steels that loose temper at relatively low temperatures.



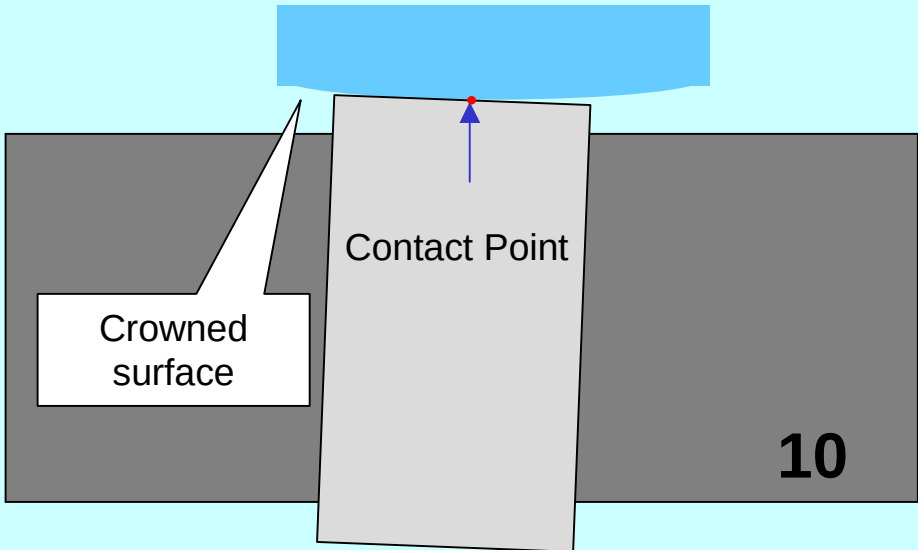
Choosing a Wheel Profile

Another advantage to having a crowned wheel is when sharpening tools that have a straight sharpened edge (chisels, plane irons, etc.), it is sometimes difficult to line the tool up perfectly perpendicular to the surface of a flat wheel. A curved wheel allows for some misalignment. A flat wheel does not.

The tool in this case would become misshapen.



The tool in this case would be OK.



Choosing a Wheel Profile cont'd

A crowned wheel facilitates more control when shaping profiles on tools such as those found on:

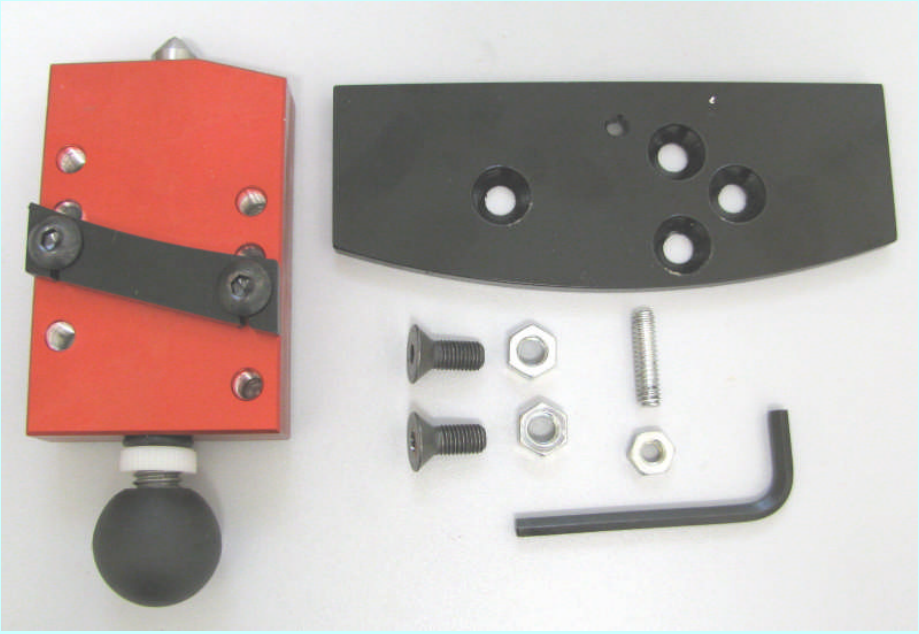
- **Side-Ground Bowl Gouges**
- **Micro-Bevel Bowl Gouges**
- **Spindle gouges**
- **Radius Skews**
- **Negative Rake Scrapers**

and any tool with a curved cutting edge.

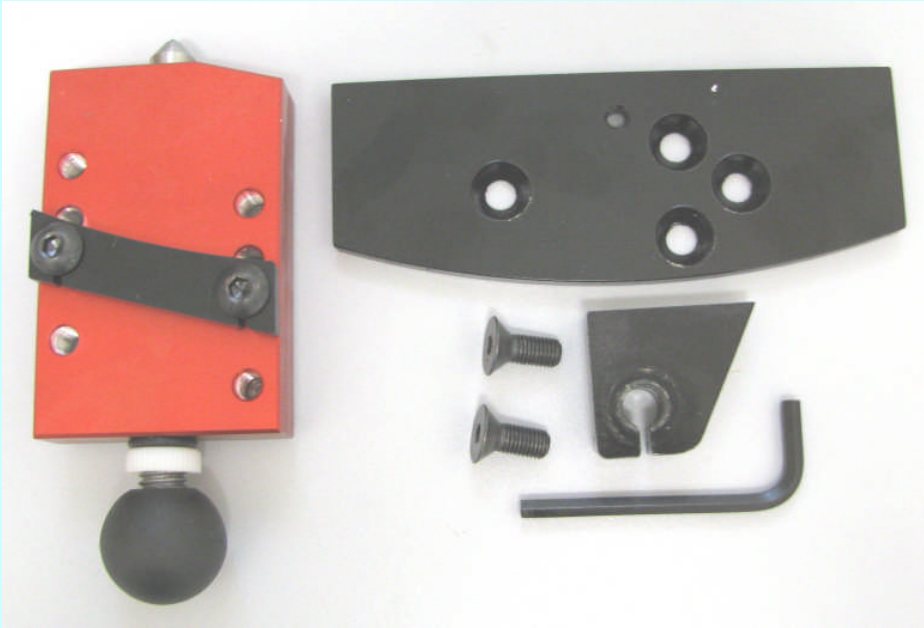
The small contact area with the wheel enables one to selectively grind specific areas of a tools, thus providing more control of the shape.

Wheel Crowning Kits

To produce a crown on grinding wheels requires our Tru N Dress Grand Slam and a Crowning Tool Rest. Shown above are two systems we offer to fit aftermarket systems by Wolverine and Veritas.

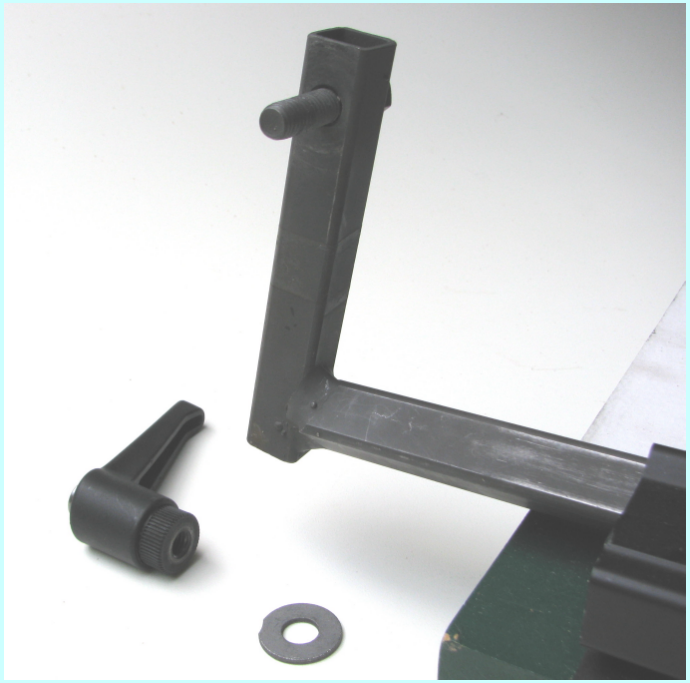


This is the Wheel Crowning Kit for the Veritas Tool Rest.

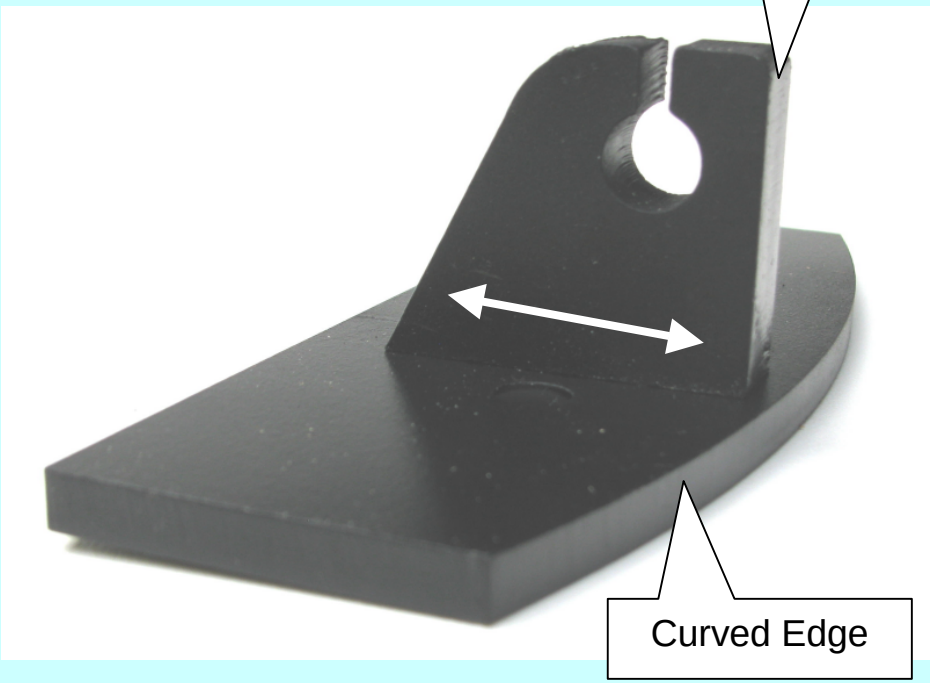


This is the Wheel Crowning Kit for the Wolverine system.

Mounting the Crowning Tool Rest to the Wolverine System



Remove the 3” X 5” tool rest supplied with the Wolverine system.

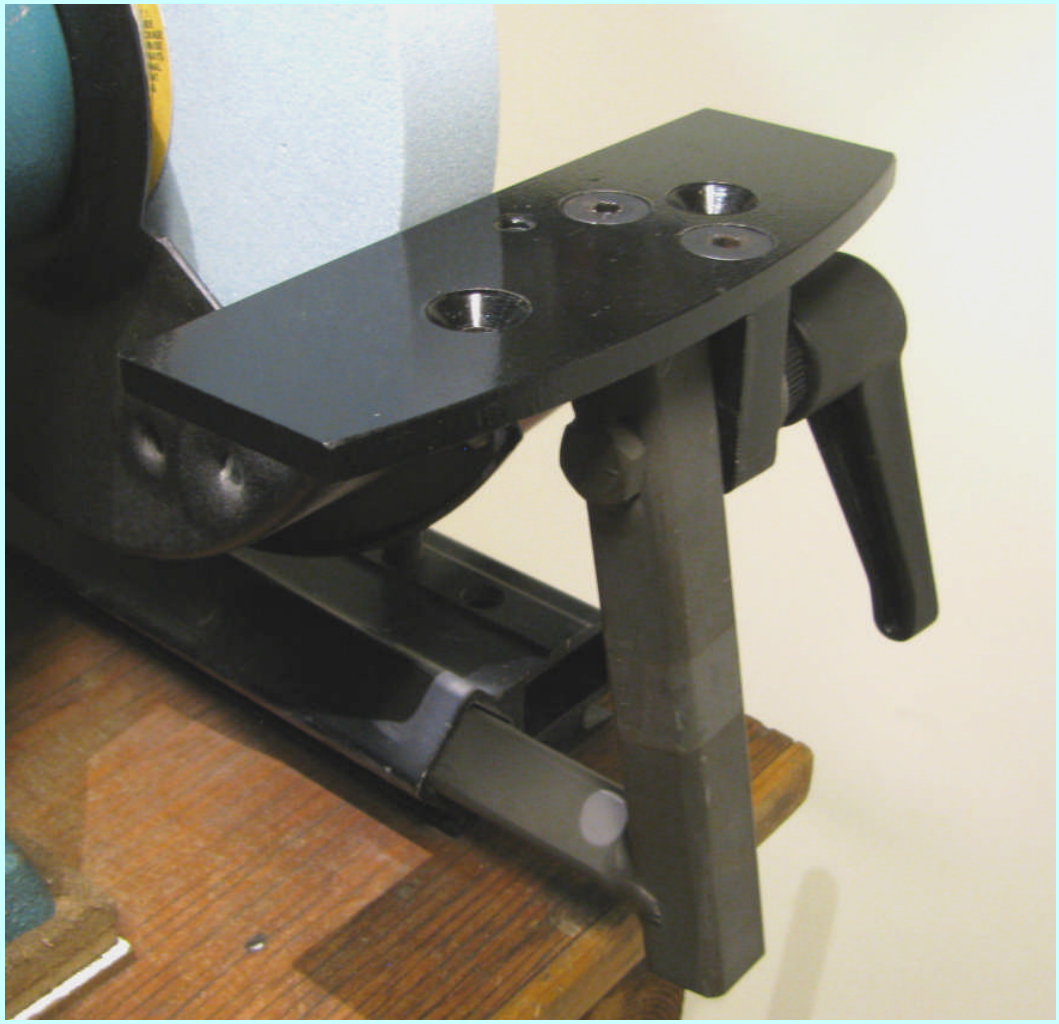


Using the two flat head screws and hex wrench supplied, attach the Tool Rest Tab to the bottom of the Crowning Tool Rest.

Notice the orientation of the tab.

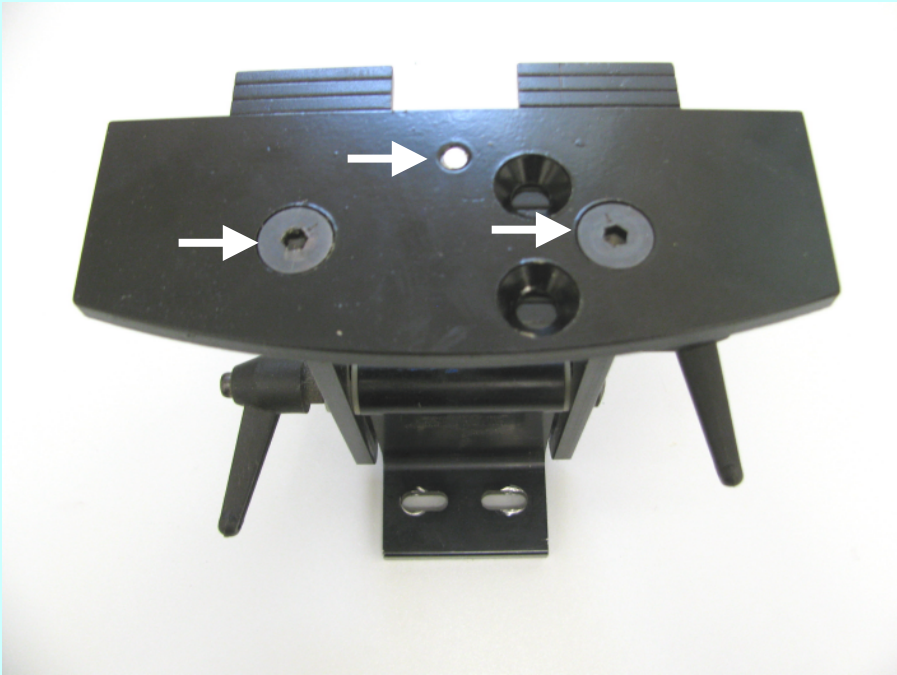
The Crowning Tool Rest

Mounted to the Wolverine System



Mounting the Crowning Tool Rest to the Veritas Tool Rest System

Stock Vertias Tool Rest

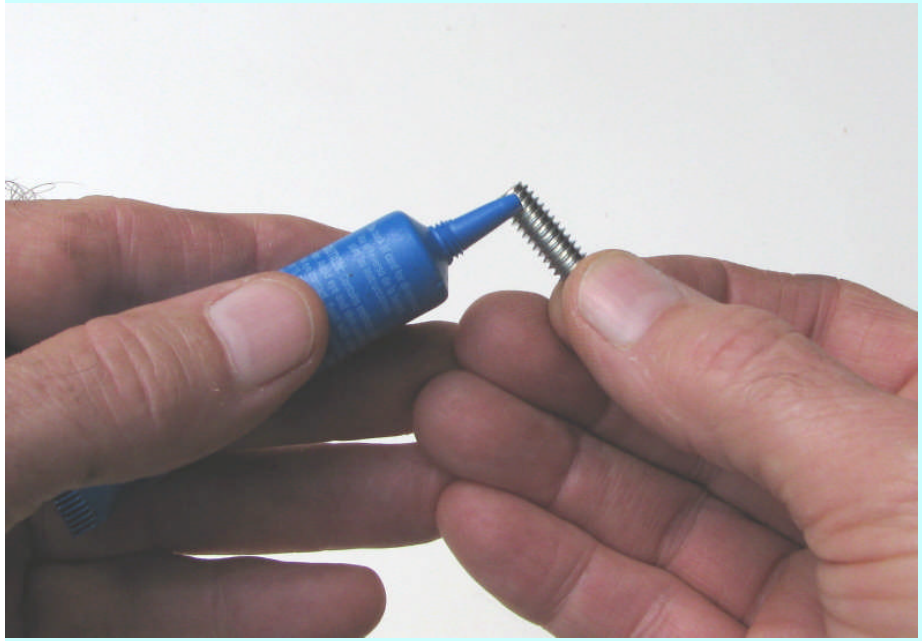


Geiger's Crowning Tool Rest mounted on top of the Veritas

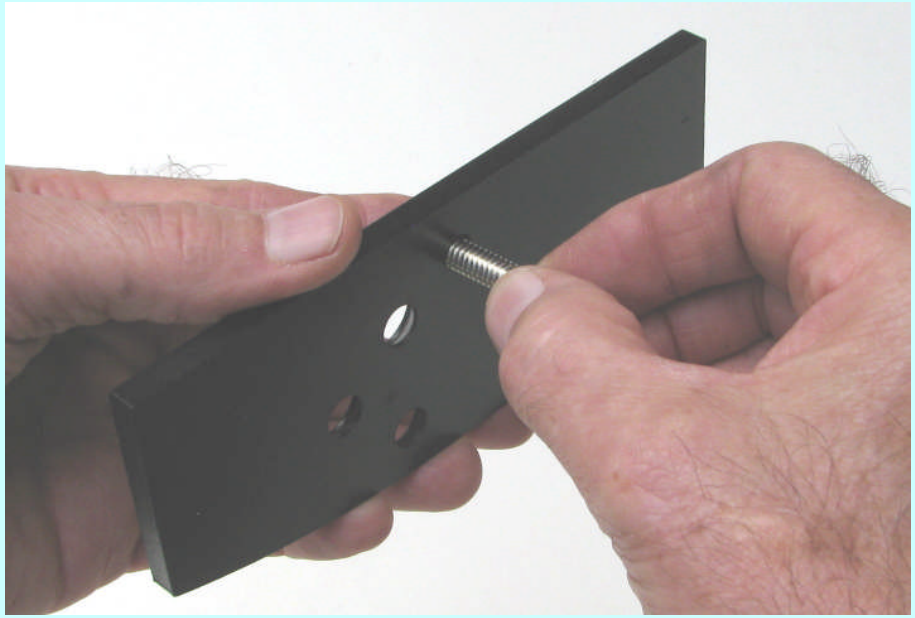
Three holes, as indicated by the arrows above, are utilized to mount the Crowning Tool Rest to the Veritas stock tool rest.

Mounting the Crowning Tool Rest

to the Veritas Tool Rest System, cont'd



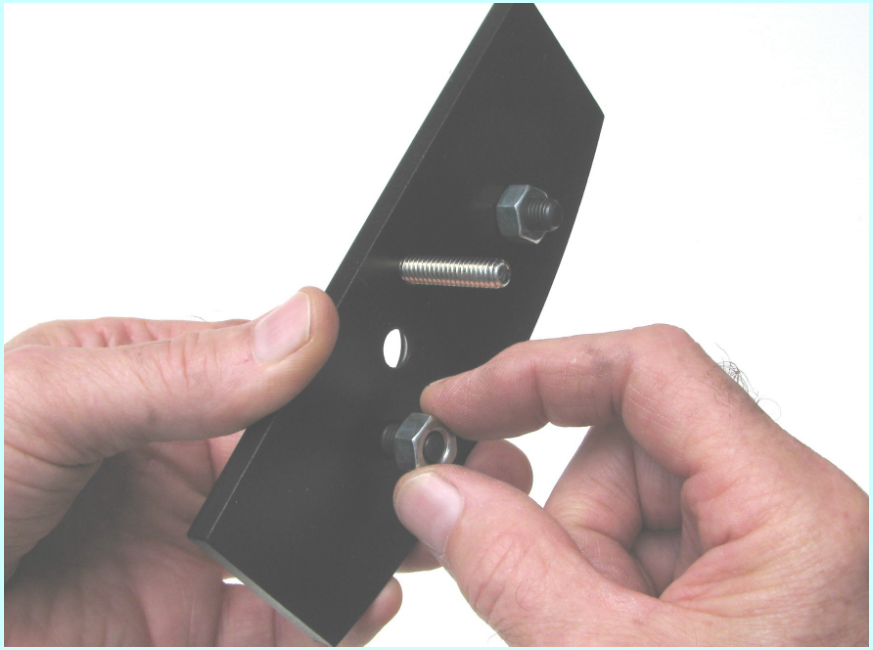
Apply a little thread lock to the stud.



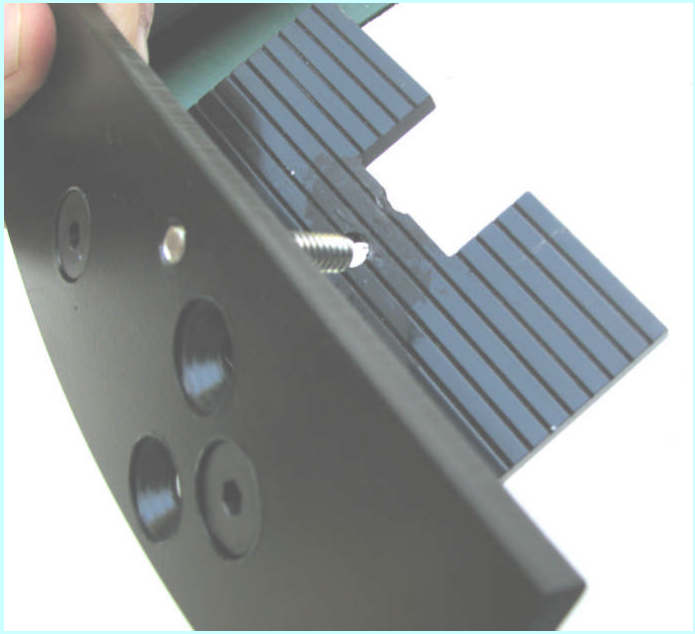
Screw the stud into the ¼" threaded hole from the bottom of the tool rest. Don't allow the stud to protrude from the upper surface of the Crowning Tool Rest.

Mounting the Crowning Tool Rest

to the Veritas Tool Rest System, cont'd



Install the two flat head screws and nuts, but don't tighten yet.

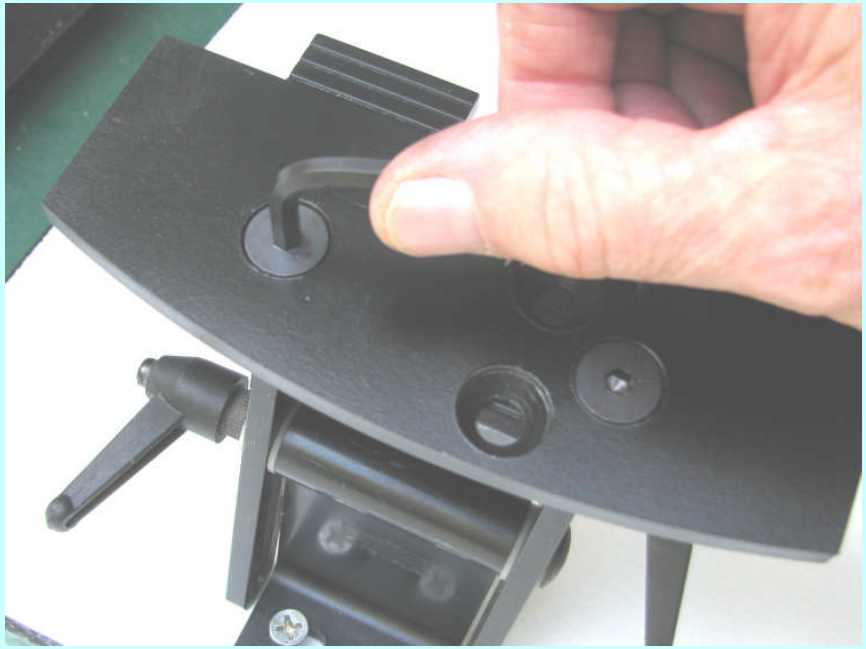


Insert the stud into the ¼" hole in the Vertas tool rest. The nuts on the two flat head screws need to go into the miter slot.

Mounting the Crowning Tool Rest

to the Veritas Tool Rest System, cont'd

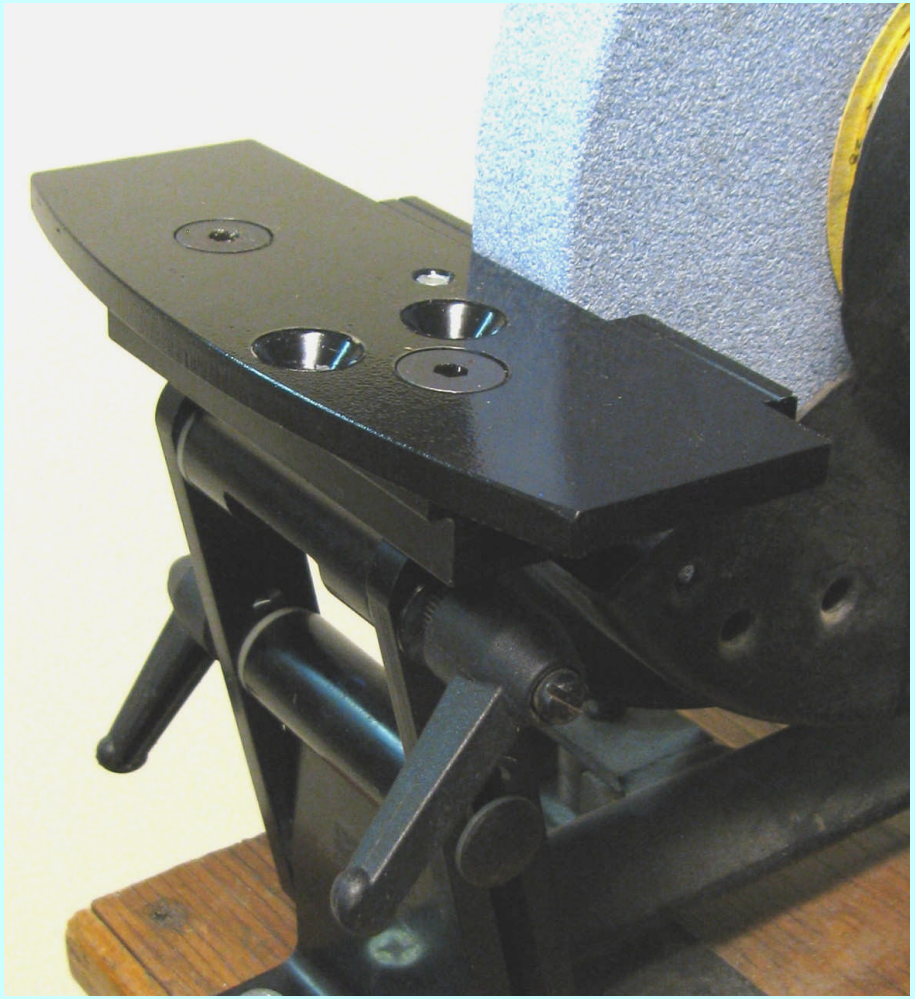
Install the ¼" nut on the stud and run it up against the bottom of the Veritas tool rest. Finger tighten if you plan to use the Crowning Tool Rest intermittently. You can snug it with a wrench of you are going to leave the Crowning tool Rest attached long-term.



Tighten the flat head screws using the hex wrench provided. As you tighten, the nuts below the Crowning Tool Rest will reposition slightly in the miter slot. This is part of the design to ensure the Crowning Tool Rest does not shift during use.

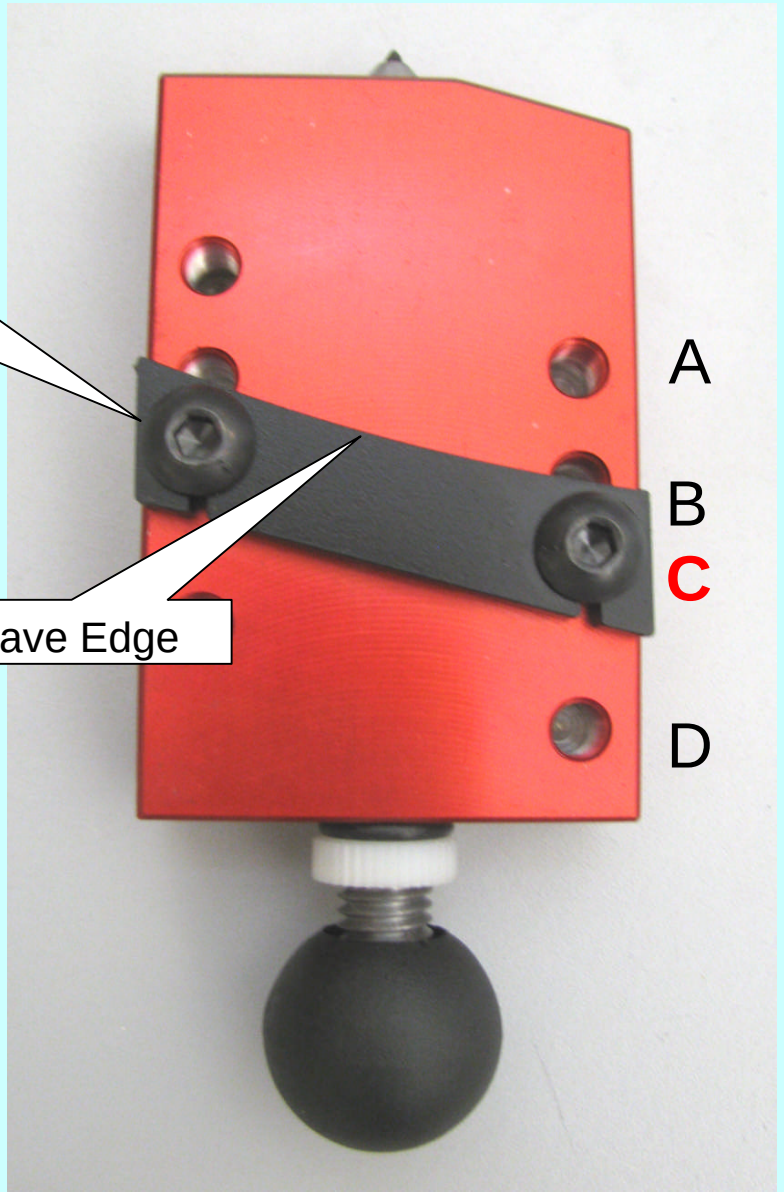
Geiger's Crowning Tool Rest

Mounted to the Veritas Tool Rest



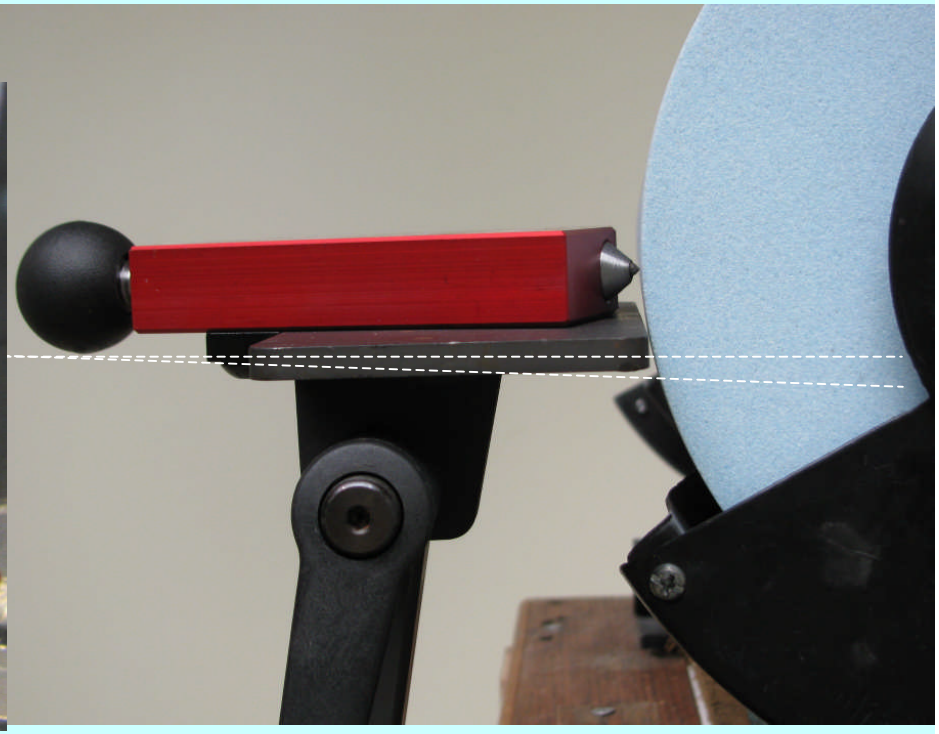
Positioning the Edge Guide for the Crowning of Grinding Wheels

Secure the edge guide in position “C”, as shown, with the concave side of the guide facing the diamond.



Crowning Tool Rest Position

Notice how the diamond shaft has been retracted into the body. This is the position in which it should be used.



Once you have secured the edge guide in the “C” position, position the crowning tool rest close to the wheel, but not so close that it touches and adjust the angle so that the top is level or angling slightly downward, as shown in the above photos.

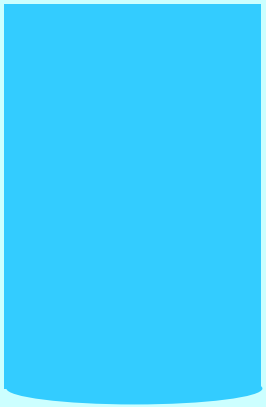
DOUBLE CHECK TO MAKE SURE THE TOOL REST IS SECURED IN POSITION!

Never dress the wheels with the tool rest angled upward.

Producing and Maintaining a Crowned Surface on Grinding Wheels

The diamond will cut more efficiently when moving from left to right, but you can move it in both directions.

The total height of the crown produced is about 1/64"



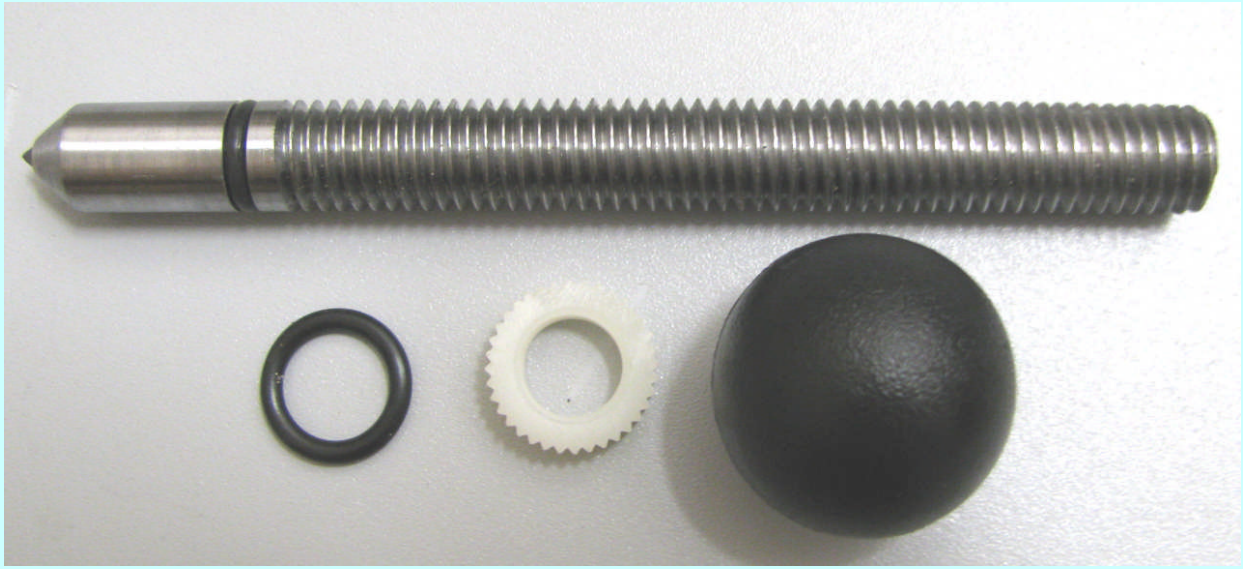
When converting a wheel from flat to crowned, take light cuts off of each corner, advance the diamond slightly and take off more. After doing this a few times, you will notice the diamond will contact wheel surface the whole way. When you've reached that point, go back a forth about 6 times without advancing the diamond and you will be finished.

Maintenance and Repair

How to recognize when a diamond needs replacing:

1) After dressing the wheel and **with the wheel completely stopped**: run a finger across the wheel surface left and right.

2) If the surface of the wheel has hills and valleys in it, the diamond needs to be replaced.



Diamond replacement kit (TND-DRK): $42

Maintenance and Repair

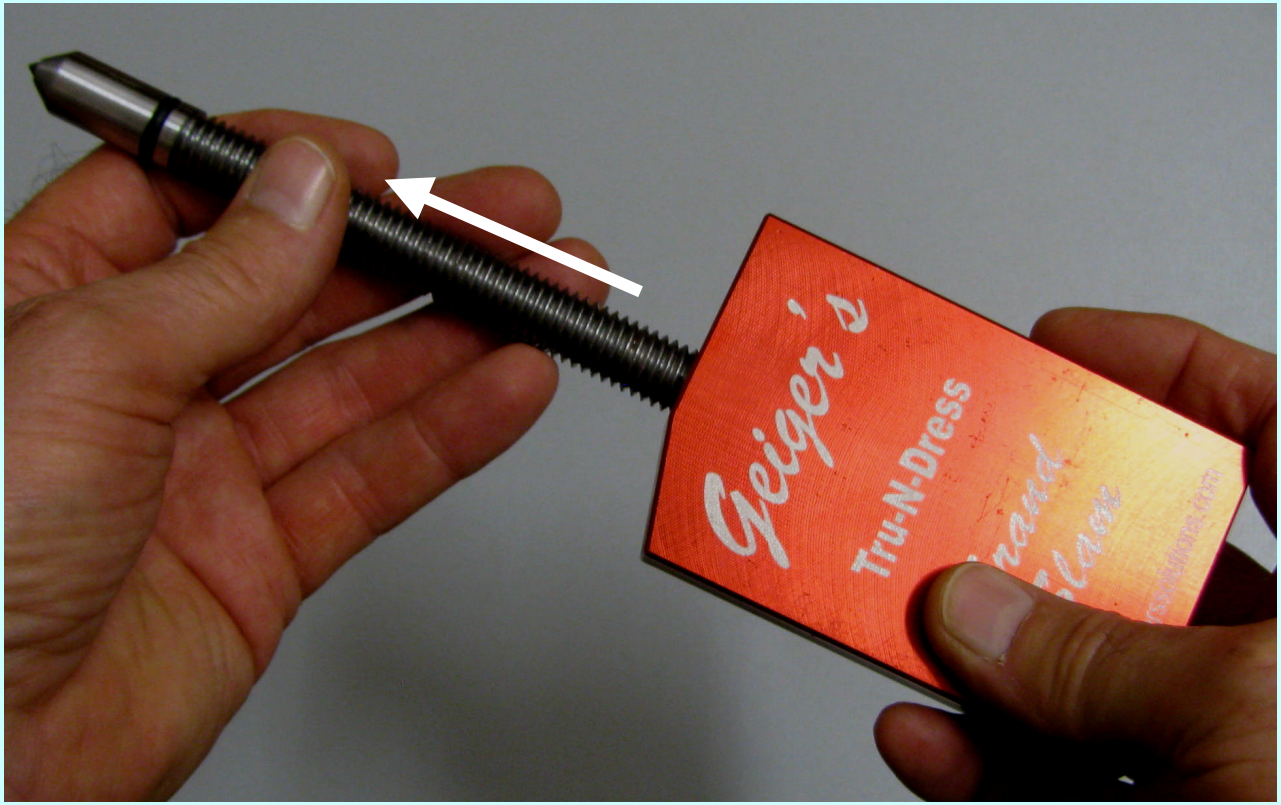
Supplies and tools you will need to replace the diamond:

- **Channel Locks**
- **Vise Grips**
- **Lubricant**
- **Thread Lock**
- **Mineral Spirits**
- **Compressed Air**

Maintenance and Repair

Stabilize the shaft using Vise Grips (on left) and grasp the knob with Channel Locks (on right) and unscrew the knob counterclockwise.

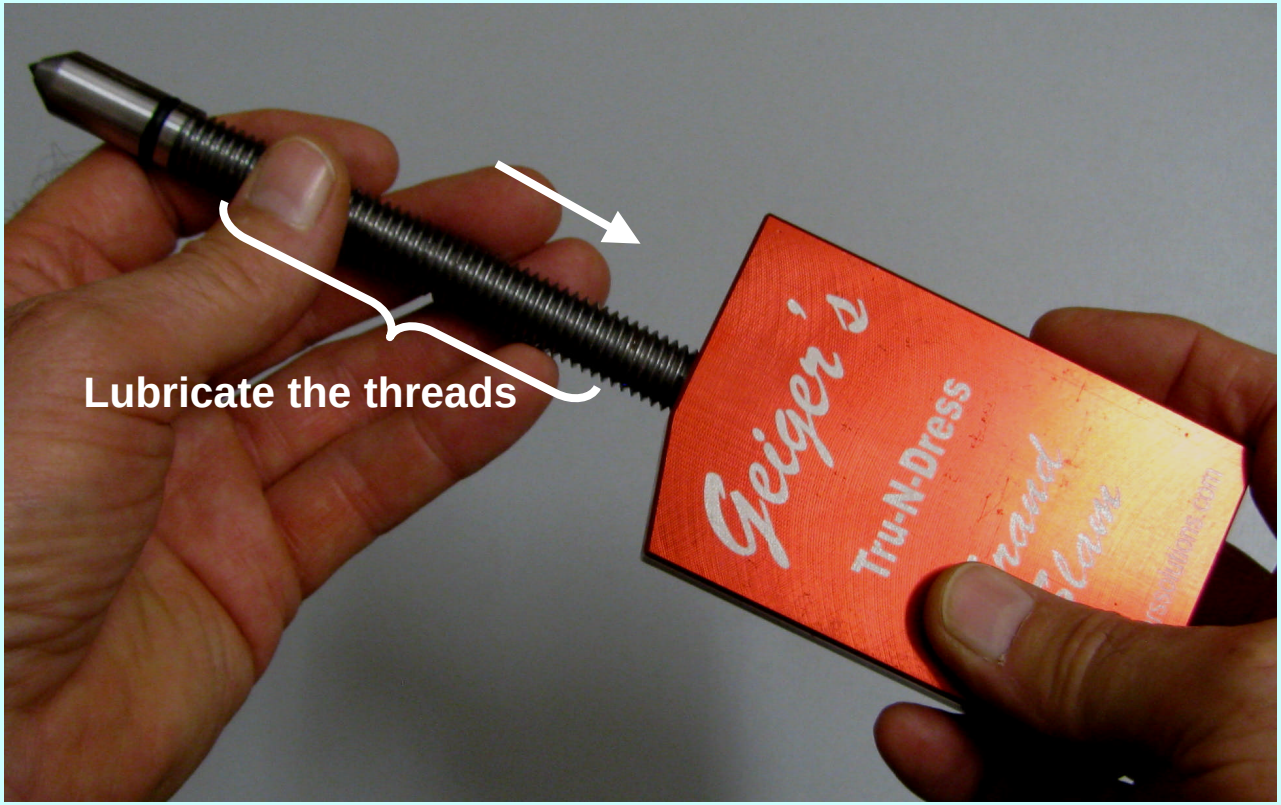
Maintenance and Repair



Unscrew and remove the shaft out the FRONT of the body. The threads will be damaged if you try to remove the shaft from the other end!

Discard the old shaft and then blow compressed air through the threaded hole in the body to remove any dust. If you have mineral spirits available, flush the hole in the body and then blow air through it.

Maintenance and Repair



Lubricate the threads then screw the new shaft into the body.

Maintenance and Repair

Slide the new o-ring on the shaft and then thread the new knurled nylon nut into place. Use mineral spirits the clean about the last ½” of the threaded shaft then apply a small dab of thread lock to the threads.

Maintenance and Repair

Tighten the knob onto the shaft.

Allow enough time for the thread lock to set up before using.

Contact Information

If you have any questions about the operation, maintenance or repair of the Tru N Dress Grand Slam, do not hesitate to contact us directly.

Thank you!

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