

TECHNICAL DOCUMENT

Tormach Vise Maintenance and Care

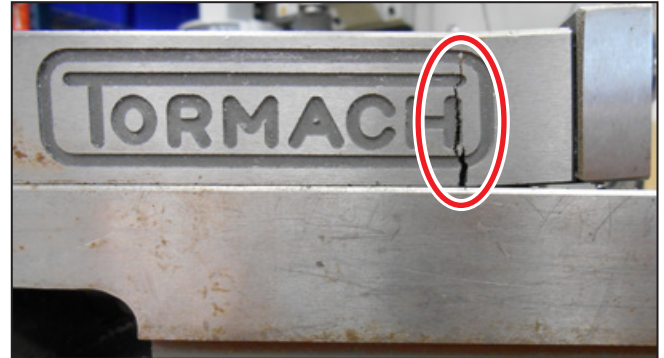
Product Identification: 5 inch Machinist Vise (PN 30553), 5 inch CNC Vise (PN 31759), 4 inch CNC Vise (PN 35285)

Purpose: This document details proper setup and use of the vises identified above.

Clamping

IMPORTANT! Do not use a hammer, breaker bar, impact driver, or other similar device to increase clamping force. Failure to do so could cause equipment damage and voids the product warranty.

The vise handle (included) is sized to allow for sufficient locking leverage while using manual hand pressure. Using excess force damages thrust bearings, screw threads, and other sliding components. If the application requires additional clamping force, consider using a larger vise.



Workpiece Positioning

Mount the workpiece as low as possible vertically to avoid damaging the vise (see **Figure 1** and **Figure 2**). Keep clamping loads centered horizontally in the vise. If necessary, use a Parallel Set to bridge the gap as shown in **Figure 2**).

PN	Description
35511	4 inch Parallel Set
32799	5 inch Parallel Set
31951	6 inch Parallel Set

Incorrect — Workpiece too high

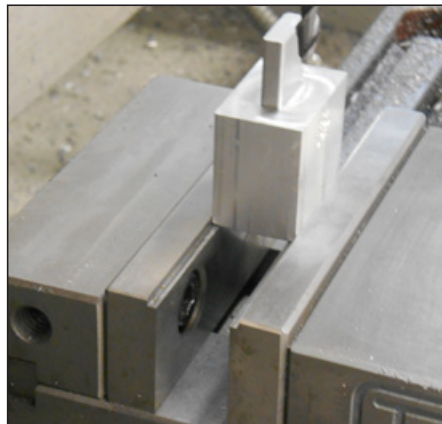


Figure 1

Correct

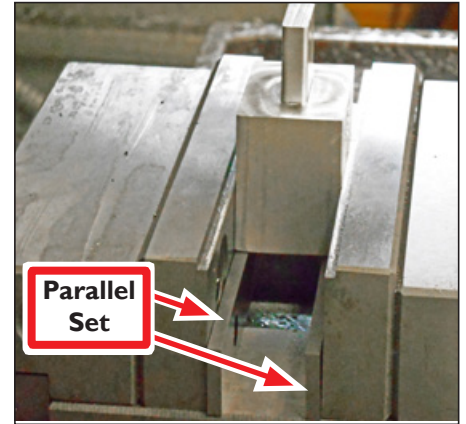


Figure 2

Thread Engagement

Different jaws use different length screws depending on the jaw thickness (see table on page 2). When changing vise jaws, make sure you are using the proper thread engagement to hold the jaw in place. If necessary, use longer screws.

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	5 inch Machinist Vise	5 inch CNC Vise	4 inch CNC Vise
Threads	7/16"-14	7/16"-14	3/8"-16
Mounting Hole Center Distance	3-1/8"	3-1/8"	2-1/2"

IMPORTANT! Failure to use proper thread engagement could result in equipment damage as shown in **Figure 3**.

Adjustment

To eliminate Moveable Jaw lift, turn the Adjustment Screw clockwise (see **Figure 4** and **Figure 5**) while simultaneously moving the jaw back and forth with the handle; motion should be smooth. After adjustment is complete, reinstall the Lock Screw. Do not over-tighten.

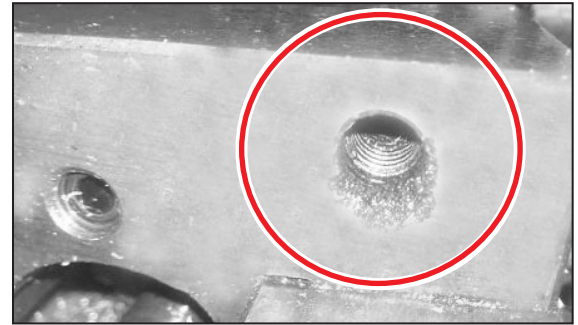


Figure 3

Maintenance

To clean out chips, remove the Moveable Jaw by backing out the Lock Screw and the Adjustment screw from the center hole (see **Figure 4**). Before you reassemble the vise, make sure both the jaw and the interior vise surfaces are free of debris and lubricate with Machine Oil (PN 31386) or similar. Reinstall and hand tighten the Adjustment Screw.

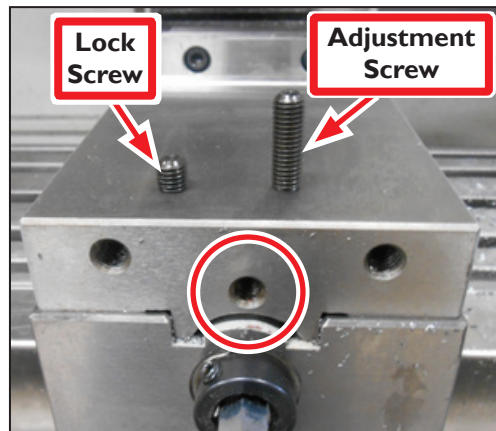


Figure 4

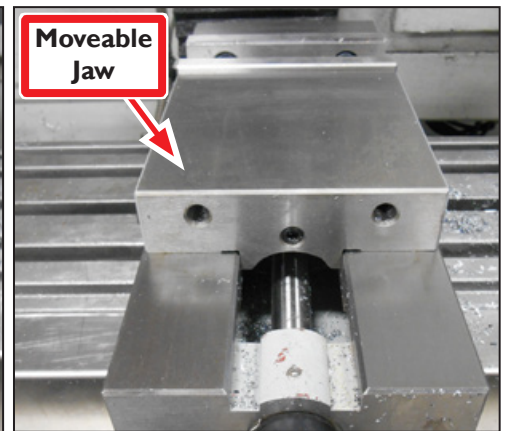


Figure 5

Regularly coat all vise surfaces with WD-40® or similar to prevent rust and ensure smooth motion. Extend the usable life of vise by keeping all sliding components free of debris.

Table Alignment

Vise alignment keys quickly and roughly align a vise to the X-axis. For most applications, this alignment method is sufficient; for applications requiring high-precision alignment to the axis motion, use a dial indicator on the fixed jaw.

PN	Description
31687	Vise Alignment Keys for 5 inch Machinist Vise
31789	Vise Alignment Keys for 4 inch and 5 inch CNC Vise