



# Preloading Instructions

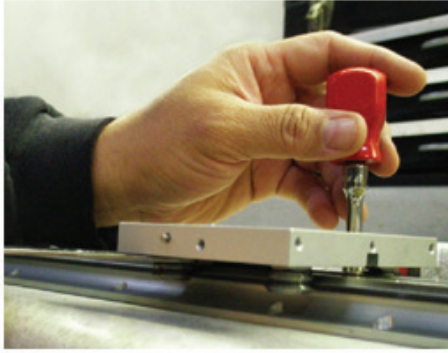


Figure 1



Figure 2

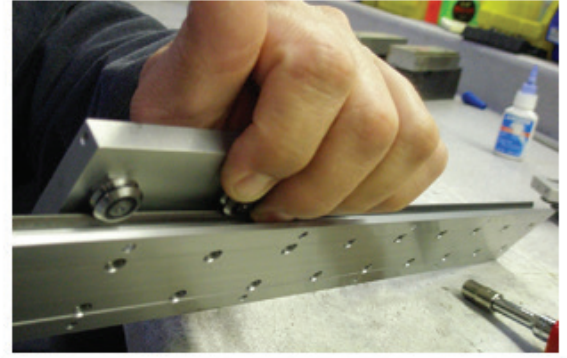


Figure 3

## Preloading a DualVee® guide wheel requires only a few simple tools:

- For DualVee® guide wheels with swaged studs, an open end wrench and a socket wrench are required.
- For DualVee® guide wheels with separate bushings and fasteners, two open end wrenches are required.

Although there are slightly different tools required for each type of DualVee® guide wheel, the process is the same for all of them

**Step 1:** Begin by placing the carriage on the track assembly with the concentric wheels fully tightened and the eccentric wheels finger-tightened within their mounting holes. Using one hand, insert the open end wrench between the eccentric wheel and the mounting plate to engage the hex flats of the bushing or stud on the wheel. Use the other hand to hold the open end wrench or socket wrench on the wheel's fastener (see Figures 1 and 2).

**Step 2:** Use the wrench to slowly turn the hex clockwise until resistance is felt—this indicates that the wheel is contacting the track. Then, with the wrench still held in position with one hand, tighten the eccentric wheel's fastener to lock the wheel into the adjusted position. This clockwise assembly orientation reduces the likelihood of the wheel loosening and moving out of its adjusted position because any subsequent radial load

between the wheel and track will cause a clockwise, self-tightening torque to develop on the wheel fastener.

**Step 3:** To check the level of preload, hold the carriage in place with one hand and rotate the wheel with the index finger and thumb of the other hand; the wheel's running surfaces should be able to slide on the track when the wheel is rotated with moderate hand turning effort (see Figure 3). If the wheel cannot be rotated, adjust the wrench position to reduce the preload and try again.

**Step 4:** Manually slide the carriage along the entire length of the system to determine whether there are any noticeable variations in rolling resistance. If there are, readjust the eccentric wheel as necessary. If the variation is unacceptably large, the tracks are likely not parallel enough and will need to be realigned.

DualVee guide wheels have substantial load carrying capacities and will become more smooth under load. Use the palm of your hand to apply downward pressure on the adjusted carriage when sliding along the track.

**Step 5:** If there is more than one eccentric wheel on the carriage, repeat Steps 2 through 4 with all of the other eccentric wheels. Once all wheels are adjusted, recheck all wheels, concentric and eccentric, for preload using the stationary carriage wheel rotation and sliding resistance methods described above, and readjust if necessary.