



# Cushion Rail Information Panther Update



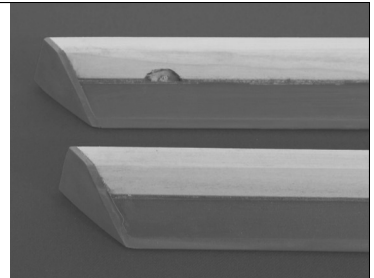
www.valleydynamoparts.com

**Our Dual Density K-66 rubber is optimized for shot accuracy. Based primarily on feedback received from Tournament play, this is the rubber of choice for new production tables and replacement cushion rails.**



All rail rubber is date coded. We also began stamping the profile and build date on the wood rail in 2002 to make it easier for Operators to keep sets matched. All packed boxes of genuine Valley-Dynamo rails are date stamped, and all sets since 2009 now have a Richland Hills TX stamp.

## About our new 5-bolt Rail System



### What's different?

- ◆ Two additional rail-bolt attachment points added
- ◆ Now using Threaded Inserts instead of T-nuts
- ◆ Small dead spots in rubber now eliminated

**What are the advantages to the new system?** First, going to a five-bolt system on the new Valley Panther and Panther ZD-X tables allows for more secure attachment without risking overtightening the bolts. Now if one rail bolt backs out, comes loose, breaks—FOUR Bolts shoulder the rest of the load instead of two, and the load is evenly distributed. Second, the Threaded Inserts can be more easily replaced in the field and are less likely to strip. Third, the threaded inserts allowed us to eliminate the gaps shown in the photo above. The small dead spots these gaps allowed are now gone, and the cushion rail rubber can do its job more effectively.

**Will the new rails fit my existing table?** YES. We kept the center and outermost bolt locations unchanged. If your table uses three bolt rails, the five bolt rails should fit just fine. For tables built prior to 1999, the same rules apply for using newer rails on older tables (see next page). For old pre-1970 tables with rails attached using wood screws, these rails will also not work.

**Can I modify my table so the Cushion Rails attach with five bolts?** Specialized CNC equipment ensures the bolt holes are correctly located on new tables. While modifying an old table is possible, it is not recommended.

**HOW TIGHT IS TIGHT ENOUGH?** Players' complaints about "dead rails" may be easily solved with simple tightening of the rail bolts. We are frequently asked how tight the rails should be. **65 inch-pounds** of torque\* provides the optimum tightness for cushion rails. This setting assures the rails can stay set at the recommended height and maintain the expected rebound properties (although proper mounting is a much bigger factor in play quality than tightening the rail bolts to specifications). To avoid cross-threading your rail bolts, **MAKE SURE YOU START THE BOLTS BY HAND BEFORE FULLY TIGHTENING to torque specs.** Cross-threaded bolts are not a covered warranty failure.

*\* DeWalt setting #13, Makita setting #16*

**WHAT IS THE PROPER CUSHION RAIL HEIGHT?** – BCA Specifications are 60% - 64% of the height of the object ball, or more simply measured: 1 7/16" above the bed of the table. Many people align the cushion rail even with the top rail laminate—which should put the rails at or below the bottom-end of the specification. If you prefer to increase the speed or bounce of your rails, lower them at your own risk.

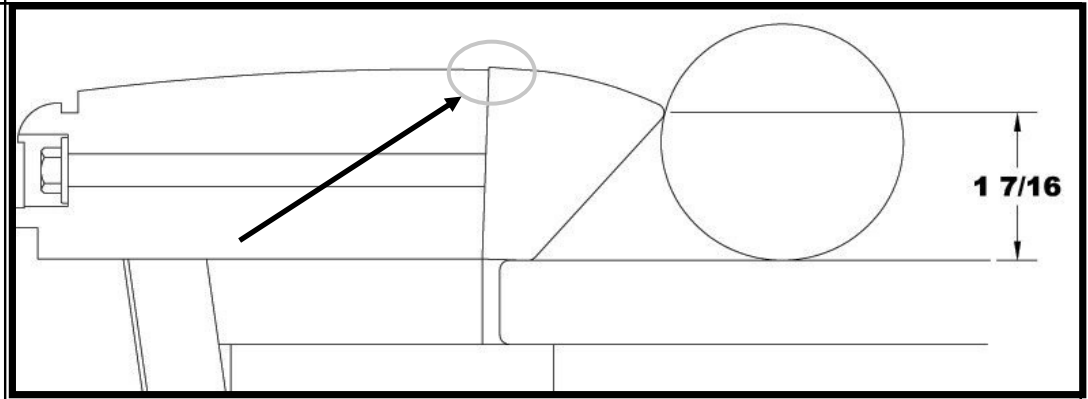
The first step for any complaints about "dead" cushion rails should be to measure the height and verify it is within specs. Rails mounted too high will play dead. The best tires in the world will ride horribly if not mounted and balanced properly.

**THEY STILL LOOK A LITTLE HIGH TO ME:**

Sometimes, the cushions may be as much as 1/16" higher than the rail laminate. **NOT A PROBLEM.**

Rail height is measured from the slate surface up. If you set the cushions so they are flush with the rail laminate and ignore the critical measurement from the slate surface, you in-

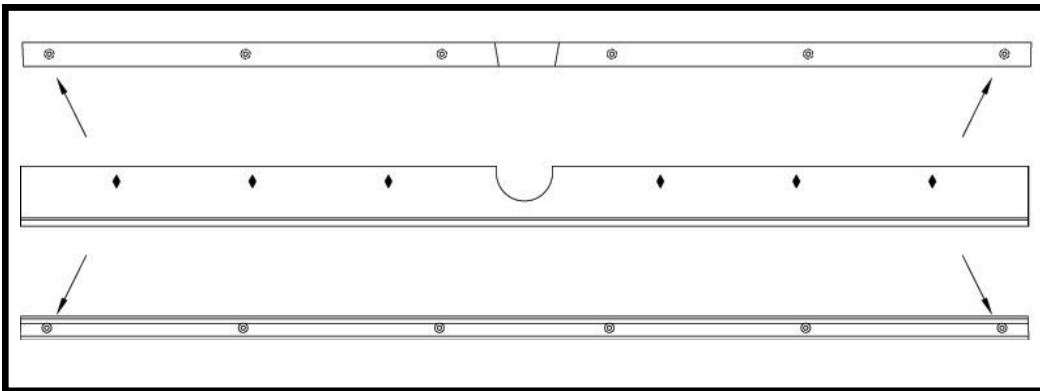
crease the chance of balls bouncing over the cushions— and onto your players!



Also, the wood backing on our cushion rails extends into the groove between slate and side wall for more solid mounting of both slate and rail. Finally, the accumulation of glue on the slate from repeated recovering over time raises the surface. It's important to strip the slate of excess glue when recovering.

## INSTALLING REPLACEMENT RAILS ON OLDER-MODEL VALLEY TABLES

The current Valley rails will only fit tables using rail bolts to attach the rails (beginning with the model 510 series: from late 1969-present). If the rails are attached with wood screws, the best option will be to have the rubber replaced on the current rails, and have them covered in new felt. If your Valley table is of 1970-1999 vintage, your table will require this minor modification for the current-model rails to fit.



Drill the end mounting holes on the side rail using a 3/8" diameter drill bit. From the cushion side, drill no deeper than 1 1/8". This will allow just enough movement of the rail bolt so it can be angled to attach to the current-model cushion rails.

