



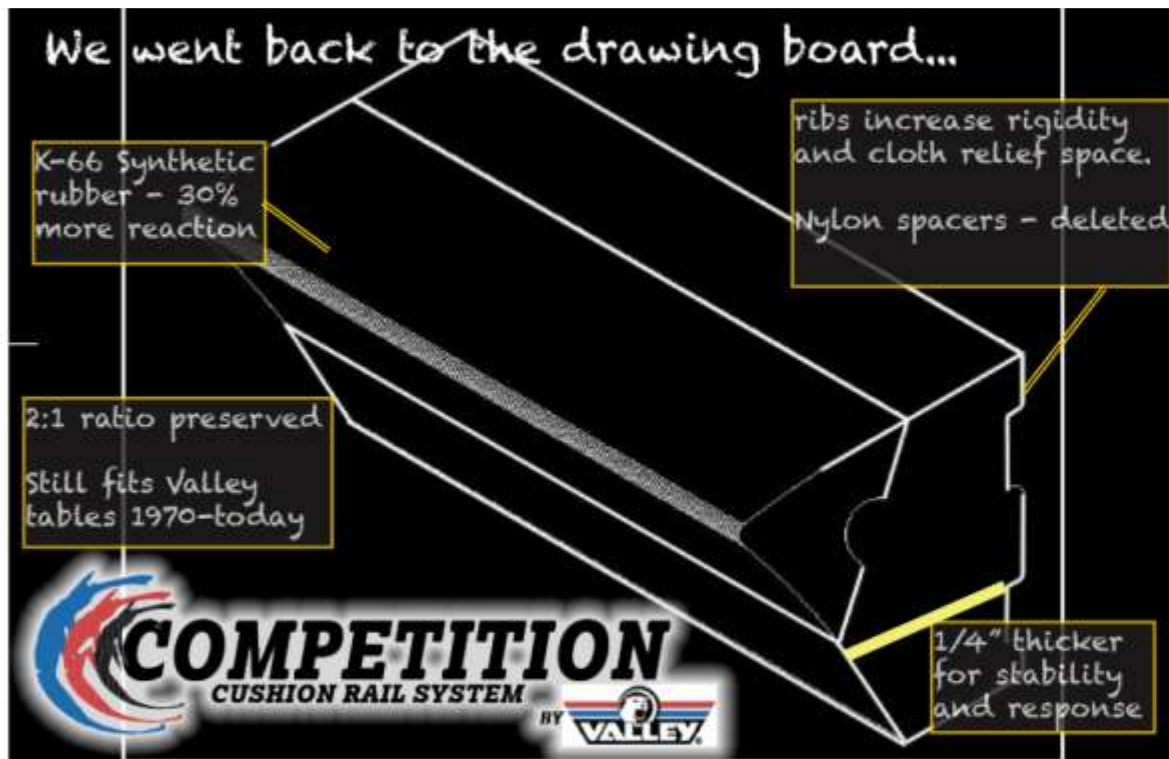
## Cushion Rail Facts and Tips



### Let's review



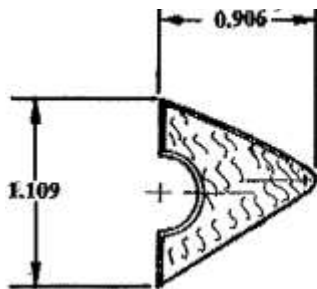
Listening to our Tournament Players, the Valley cushion rail has evolved for better responsiveness and a livelier feel... and still fits perfectly on Valley and Dynamo tables 1999-present (and with minor modifications on tables 1973-1999)



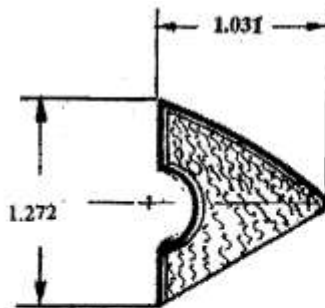
# Rubber Profile—history and relevance

Valley-Dynamo has used three different profiles of cushion rail rubber: U-23, K-55 and the current spec – K-66. When changing your rail sets it is critical that the profile is consistent. Valley switched from U-23 to K-55 in 1989 and from K-55 to K-66 in 1999.

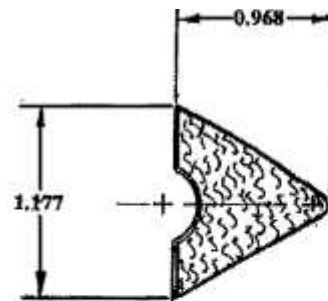
Dynamo switched between K-55 and K-66 several times, based on player and Operator preference; but left NO RECORDS what was used when and when they switched. Please don't have a toddler tantrum and tell us "I'll guess I'll just buy another table then." if we don't know the answer—there are no records.



U-23—prior to 1989



K-55—1989-1999



K-66—current use for nearly 20 years

Does it matter that your table came from the factory with U-23 rubber? Is it crucial you replace your cushions only with U-23 rubber cushions. NO! Valley and Dynamo cushion rails have modified the wood backing through the years so the current rails will maintain a 2:1 playfield ratio on your table.

All rail rubber is date coded. We also began stamping the profile and date on the wood rail in 2002 to make it easier for Operators to keep sets matched. All sets since 2009 now have a Richland Hills TX stamp, and with the introduction of the Competition rails, new sets should have "CCR" added.

So when your cushion rails feel like they're not playing up to par... check the date. It's made to last, but it doesn't last forever. Cushion rails used in a commercial setting will start to lose action after 18-24 months. On a table used occasionally, the rubber will start to dry and crack after about 10 years. Sooner when subject to the environment in a garage or basement without AC and heat.

Playing with mismatched rails is like hitting the Basketball court with one Air Jordan and one Converse All-Star. Someone watching may or may not notice, but if you're the one playing, you will notice... big-time!

# Why can't I get the old 3-bolt Valley cushion rails?

In 2009, Valley transitioned to a five-bolt cushion rail with the introduction of the Panther-series tables

**Will the five-bolt Valley rails fit my existing three-bolt table?** **YES.** As shown in the photo to the left, we kept the center and outermost bolt locations unchanged. If your table uses three bolt rails, the five bolt rails should fit just fine.

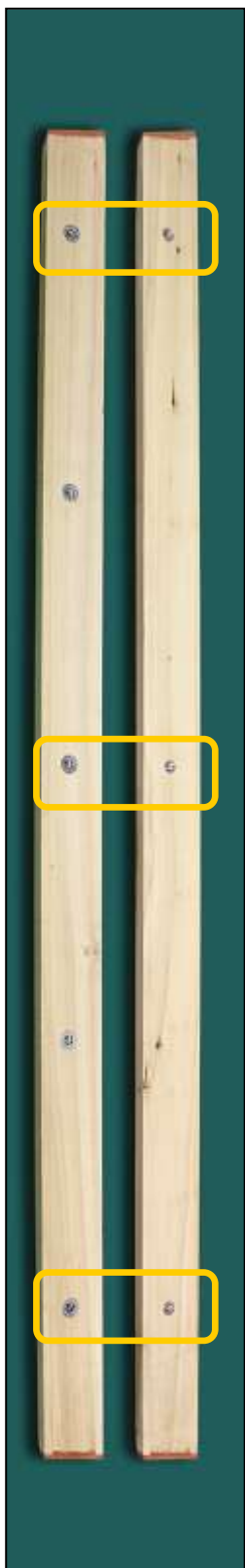
For tables built prior to 1998, the same rules apply for using newer rails on older tables. The table modification procedure—demonstrated on the next page—is unchanged.

Likewise, for old tables where the rails attach with 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 older table is possible, it is not recommended.

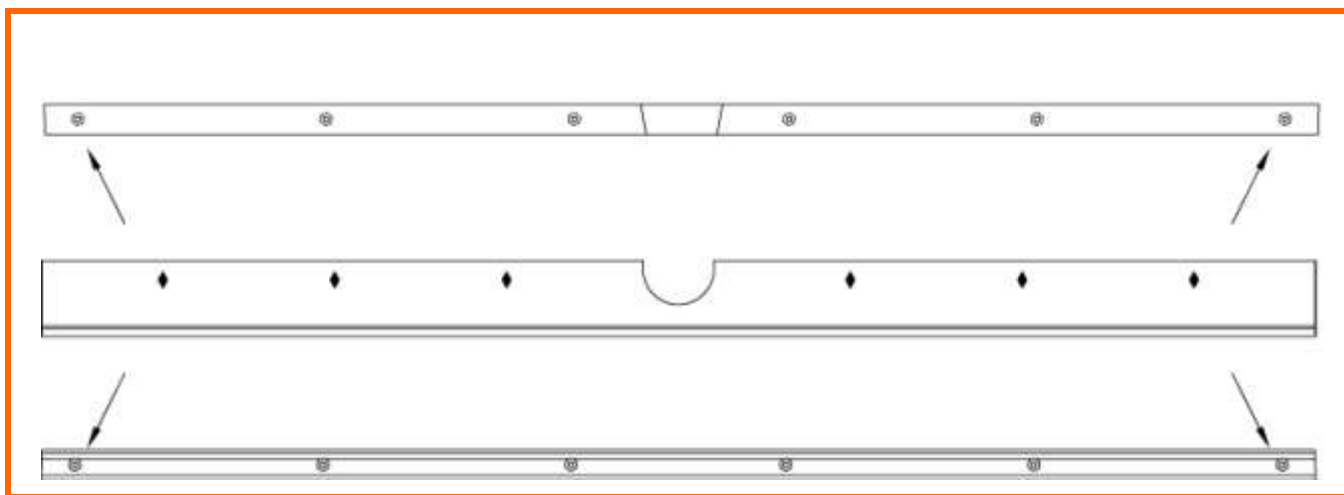
**Will the five-bolt rails fit my Dynamo table?** **YES.** The three bolt holes that matter will match up; but on tables built prior to 1998, mounting the rails low enough could be a problem and will require shaving off approximately the bottom 1/8" of wood on each rail.

Dynamo-only rails remain in stock while supplies last. For newer tables the Universal rails are your best value.

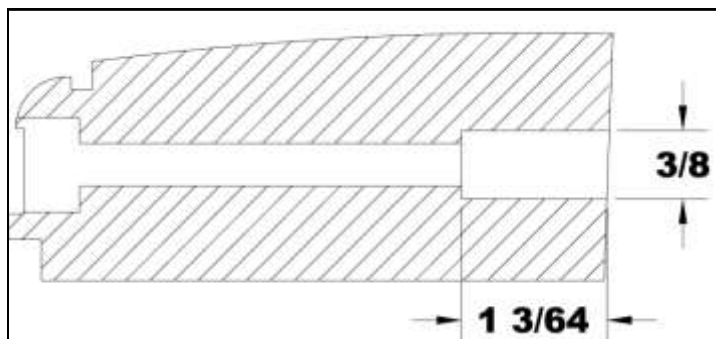


## INSTALLING REPLACEMENT RAILS ON OLDER-MODEL VALLEY TABLES

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.



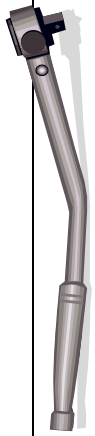
Drill the end mounting holes on the side rail using a  $\frac{3}{8}$ " diameter drill bit. From the cushion side, drill no deeper than  $1 \frac{3}{64}$ ". This will allow just enough movement of the rail bolt so it can be angled to attach to the current-model cushion rails.



**[www.valleydynamoparts.com](http://www.valleydynamoparts.com)**

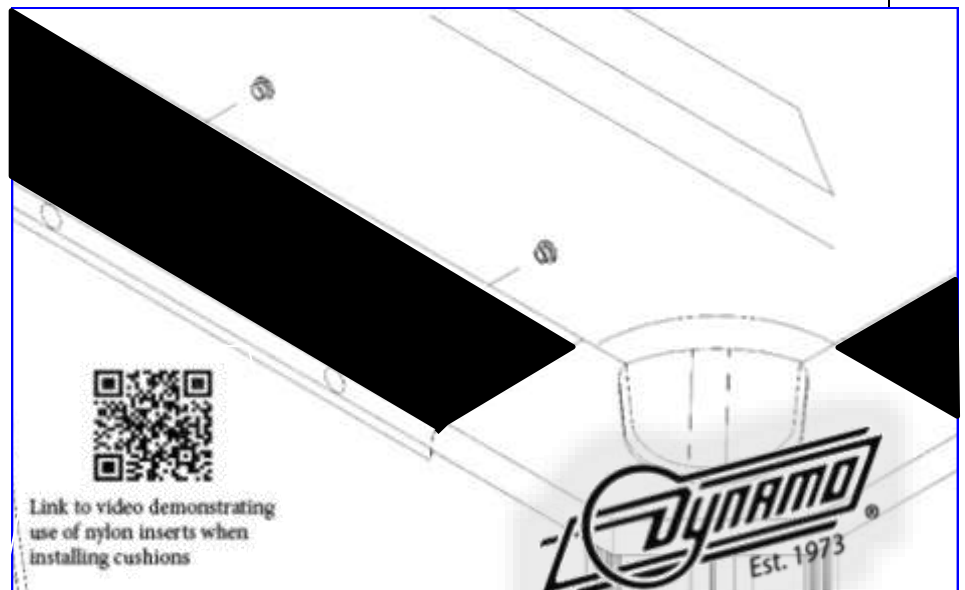
**Your best source for genuine Valley-Dynamo Parts...  
...is Valley-Dynamo**

# **“I’ve been fixing pool tables forever, Don’t tell me how tight to make the rails”**



**HOW TIGHT IS NOT 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. Experience has found that **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 matters more to play quality than tightening the rail bolts to specifications). **To avoid cross-threading your rail bolts, MAKE SURE YOU START THE BOLTS BEFORE FULLY TIGHTENING to torque specs.** Cross-threaded bolts are not a covered warranty failure.

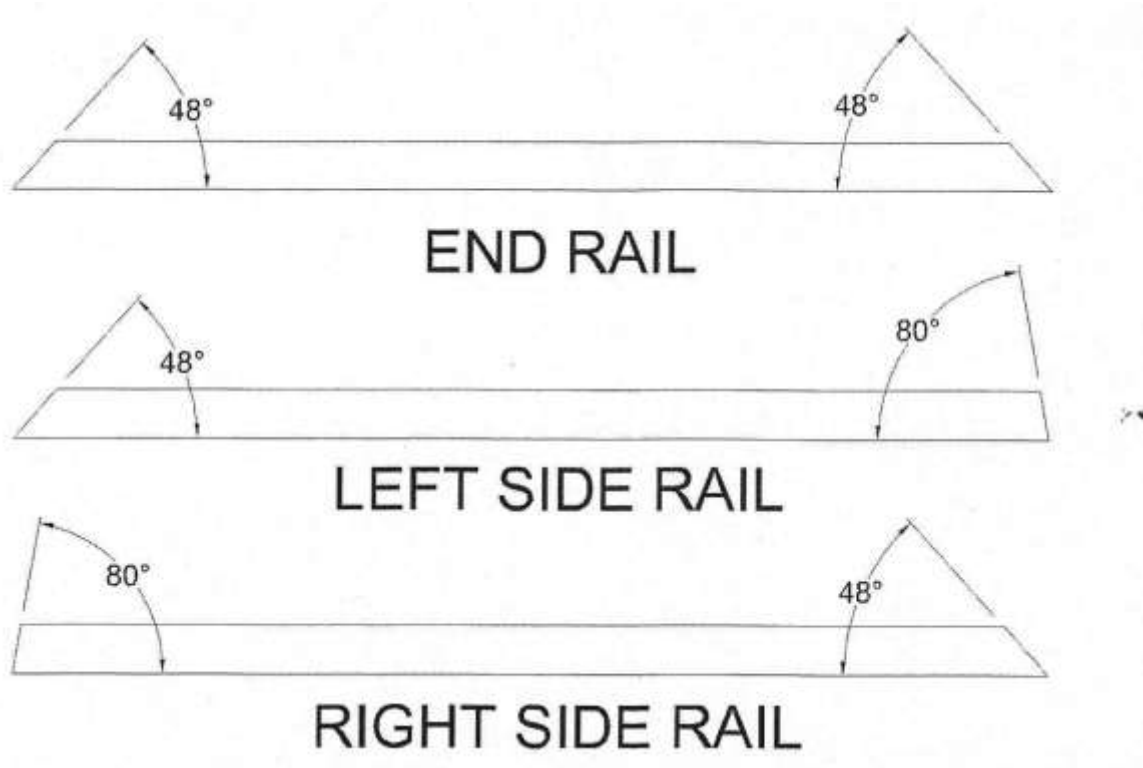
During the 2010s, Dynamo cushions included a set of Nylon Inserts. These are no longer supplied or needed on newer rail sets under 8 years old



If you have replaced an oil filter you understand. Too tight can be a bad thing. Too tight can cause damage. Just get those cushion rails snug and secure, and everything will be OK!

## **Do it fast or do it correctly?**

# Is the shoe on the right foot?



We occasionally get calls/e-mails from customers VERY upset with us that the bolt holes and angles on their cushion rails are totally wrong.

Now no laughing from you folks who've been working on tables for 60-odd years or however long. Let's give the rookies a hand for even wanting to learn about this.

Remember, your left and right shoes are different, and so are your left and right cushion rails.

Stand at the long side of the table at the center pocket. Either side. Trust us.

“Left” and “Right” are your left and your right. No matter which center pocket you stand at this is the case.

“End” are the two rails way out at the ends of the table.

So remember, if your cushion rails are the right width but totally don't fit, be sure you are trying to fit them in the right locations.



### **Overtightening as we warn you...**

- on this sheet
- or the sheet sent with the rails
- or on the outside of the box

Will result in exactly this sort of damage to your rails. This is not a covered warranty failure. PLEASE install with care and, if needed, use the Nylon Inserts.

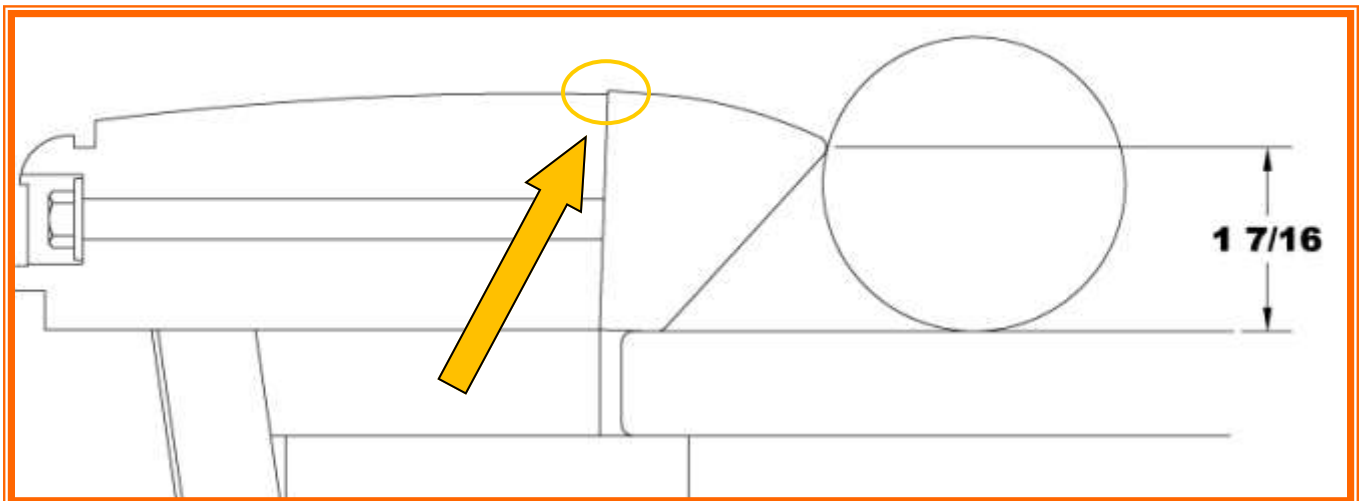
The **ONLY** way this happens is from improper installation. Cushion rails are built by screwing these inserts *into* a hole drilled in the wood. That insert is flush to the wood (see below), no bulge, no split wood. The *only* way the wood bulges is for a bolt to go in the hole so tightly that something must give. The nylon spacer prevents this, as does proper torquing. PLEASE **DON'T** put the screwdriver bit into your drill and go full-send. Install with care.

We still get rail sets back insulting our “terrible quality”, etc. “I couldn’t even install them.” **EVERY TIME** they come back we find this. **EVERY TIME** it’s defective installation, not defective cushions.



**WHAT REALLY IS THE PROPER CUSHION RAIL HEIGHT?** – A frequently-asked-question if ever there was one. BCA Specifications are 60% - 64% of the height of the object ball, or more simply measured:  $1\frac{7}{16}$ " above the bed of the table. Many people align the cushion rail even with the top rail laminate—which should put the rails at the bottom-end of the specification. Valley-Dynamo sets rails at the top-end of the specification from the factory. This allows an operator to use unbacked bed cloth on the slate but still keeps the nose of the cushion within specifications and above the top rail laminate. In our years of experience, a higher setting keeps balls from “jumping” off of the table just as easy as the lower setting. (Flying pool balls are usually not appreciated). If you prefer to increase the speed or bounce of your rails, set them lower... 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.

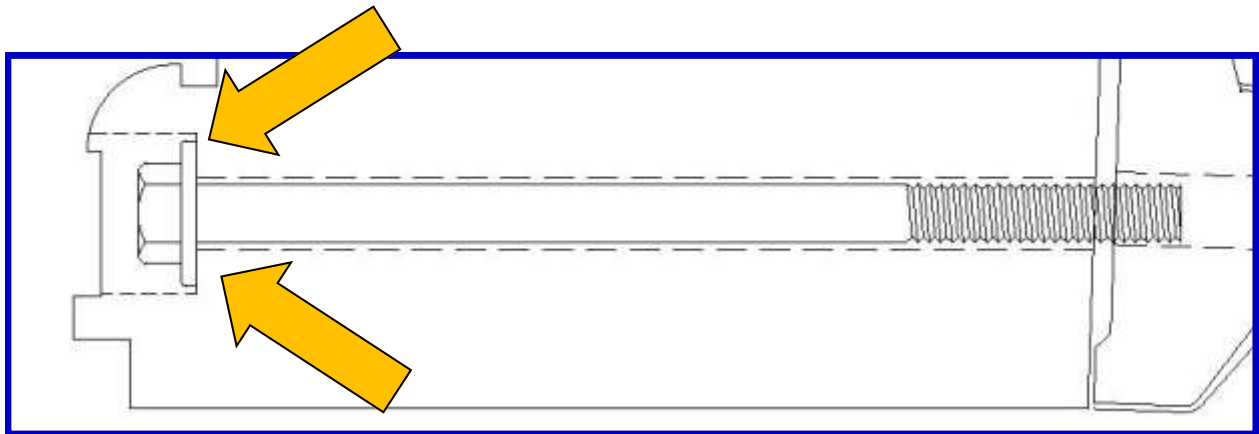


**THEY STILL LOOK A LITTLE HIGH TO ME:** Sometimes, the cushions may be as much as  $1/16$ " higher than the rail laminate. Not a problem. Rail height is measured from the slate surface up. If you set the cushions so they are flush with the rail laminate and ignore the crucial measurement from the slate surface, you increase the chance of balls bouncing over the cushions— and onto your players!

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

Also, 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.

Rails mounted too high can also result in dead action. Finally, rails that may seem dead could have experienced separation in the glue bond attaching the rail and wood. Strip the rubber away from the wood, clean the old glue residue from both surfaces, and re-glue to solve the problem. The cushion rails on a table in heavy use for more than 18 months will **begin to lose their bounce**. Consider restoring the table's play with a new set of Genuine Valley-Dynamo rails—they are available pre-covered, or uncovered (most sizes) so you may use your choice of cloth.



One more tip— **Overtightening rails repeatedly *in the past*** will cause the tightened rail bolts to gradually dig into the wood, so now a rail tightened to normal specs will be a little too deep. If this is the problem, add a few more washers to your rail bolts before tightening will allow for proper spacing.

CONGRATULATIONS! YOU READ ALL 9 PAGES,  
WE TOLD YOU THERE WAS IMPORTANT STUFF HERE