

## **A Total Overhaul and Playing Field Replacement on a Nishijin Model B**

Supplies: Simple Green to clean all the parts. White vinegar, Painter's tape, Double sided sticky tape, Turtle Wax Chrome Polish on the metal parts - this has a good shine and removes light rust and Instant Rust Out for heavily rusted areas. Meguiar's Clear Plastic Cleaner on the Plexiglas and clear plastic parts, Mothers Mag & Aluminum Polish for brass parts and brass nails, Windex on the glass. Q-tips with paper sticks (Not Plastic sticks), Wrapping Twine twisted cotton light load, Ziploc sandwich bags. I use two boxes, one for parts off the front of the machine the other for parts off the back. This is handy during reassembly. If you wish to reuse the screws, it is best to have a tumbler with walnut shell medium. I replaced the wood screws with stainless steel screws, 4X5/8 Phillips Flat. These are to use in place of the staples holding the plastic pieces on the back of the machine. Use the screw holes in the plastic and drill a small pilot hole for them as you disassemble. 4X5/8 Phillips Oval, these replace the screws around the frame on the front. 2x3/8 Phillips Flat, these are to replace the screws on the tulips, pay pockets and the main attraction on the playing field. 6X1 1/2 Phillips Flat, these are to replace the nails holding the playing field to the wood frame

I chose this machine to try a new idea I had for the playing field replacement because I had two of the same model and type Pachinko's.



As you can see there are major water stains on the playing field as well as dirt and flaking paint on the pay pockets and spinners, and the stickers on the tulips are faded or gone.



I first remove the glass and front playing tray, then the frame that held the glass is disassembled, I clean and polish all the parts, then reassemble them, the plastic part around the lock I clean and place in a Ziploc with the nails that held it in place then place in the front box.



I then removed the main attraction, spinners, tulips and pay pockets, clean and polish all the parts, touch up the paint or repainted and replaced the stickers on the tulips Then put them in there own Ziploc bag with the mounting hardware that was used and then place in the front box.



Start removing the parts on the back; drill your pilot holes for the replacement screws before removing the staples. This will help to line up the parts during reassembly. Parts need to be cleaned with Simple Green and placed in box for the back pieces. All metal parts are put in a tumbler with walnut shell and Turtle Wax Chrome Polish run for one to two days.



I remove the upper ball tray by cutting the staples and carefully removing them with small pliers.



With staples always remember take your time and work them out slowly. You may want to use a wood dowel to hold down the plastic as you remove the staples.



I didn't remove the ball channels on this one because they weren't in the way for the playing field replacement; I just installed new screws and pulled the staples.



I removed the lock, took it to a master locksmith and had him make a key for it so when I am done with the machine I can put it in a cabinet.



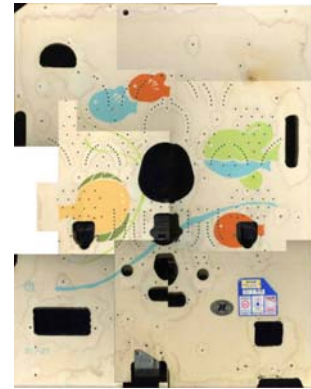
I used a flat pry-bar to carefully remove the playing field from the wood frame, working around the playing field a little at a time. Once I had it out, I laid it on some 1"X1" boards to support it while I worked on it.



To remove the brass nails, I used a modified nibbler and a small block of wood. Take your time and don't damage the nail heads. For removing the ball track, I used a small flat head screw driver and small pliers, being careful not to break the cotter pins as I removed them with the track. You can see how bad the water stains are on this machine. I cleaned the track with Turtle Wax Chrome Polish and the brass nails I soaked in vinegar for about 15 to 20 minutes. This takes a lot of the tarnish off. Dry them and put in the tumbler.



I used a flat bed scanner to scan the playing field, it was too big so I scanned it in sections at the highest resolution I could work with on my computer. Then using paint.net (It's free online) I created a new picture the same size as the playing field opening. Each scan picture I copied and pasted to the location they belong on the new picture using the nail holes to line them up.



The touching up didn't take long, just zoom in and outline each item, then use the fill with the color copy paste to cover openings and nail holes



I found a company that does car wraps. I took them the art work and they printed it. Cost was \$28 each for a high gloss 17.25"X22".



Use a sharpie to mark the edge of the playing field then carefully remove the plastic playfield cover. I used a plastic putty knife. Try and get it in one piece without scarring the wood.



Once you have removed it, carefully roll it up and put in a safe place. You will need it later.



Now you can start sanding the old paper off. Start with 60grit sandpaper then use 150grit sandpaper and finally use 220grit sandpaper. Change your sandpaper often for the glue that held the paper down gums it up. Get it as smooth as possible as any imperfection will show. Try not to completely sand off your edge marks. Use a vacuum to clean off the dust and get it out of the nail holes.





Using painter's tape put a strip across the top of your printing of the new playing field. Then line it up the best you can with your marks or what looks right to you. Once it's lined up, press the painter's tape to the board and double check the line up. Now lift up the bottom of the printing over the top, keeping the painter's tape attached to the board. Wipe down the board to make sure there is nothing on it - dust, dirt, etc. Now pull the backing off the print and lay on your board (DO NOT PRESS DOWN) using the painter's tape to keep it lined up. If you need to adjust it, lift up and lay back down once it is where you want it. Start to press down, light at first, down center and work out. With each pass, press harder.



Once you're done, remove the painter's tape. Take a Xacto knife and carefully cut out all the openings for your pay pockets, main attraction etc., etc.



Get your old plastic playing field cover from its safe place and place it on your playing field, lining up the openings then attaching it with the painter's tape. Take a small finishing nail and poke all the holes in it, marking the new playing field nail and screw holes. This will make reinstalling the nails go faster. If you wish to reuse the date stamp then save plastic playing field cover. If not, then you're done with it & can trash it.



Reinstall your lost ball opening metal cover. Then you are ready to reinstall the ball track, be careful not to break the cotter pins.



Its hammer time! Yes, it's time to put all those nails back in. I use a leather working hammer as the soft head won't damage the nails.



Reinstall the playing field in the wood frame. I use 6X11/2 Phillips Flat screws to replace the nails.





Now start to reinstall the back mechanism using the 4X5/8 Phillips Flat screws.



I also replace the paper in the flipper spring, it's a 3"X5" piece of news paper folded really tight or you can put a message to the future with your own paper.



Before I start to reinstall the fetchers on the front of the playing field, I like to give the brass nail one good polish using Mothers Mag & Aluminum Polish. Apply a small amount with a Q-tip to the nail and using the Wrapping Twine twisted cotton, loop one time around the nail and slide back and forth. It turns the cotton twine black and puts a great shine on the nail. It takes a long time to do but is worth it. Use the Q-tips to wipe up excess polish afterwards.



If you reuse the date stamp, get the plastic playing field cover and lightly sand the paper it down smooth on the back of the plastic behind the data stamp. Then apply double sided sticky tape to it, cut it out and place over the one on the playing field. Now reinstall all the playing field fetchers and start adjusting nails.



Reinstall the metal frame for the glass using 4X5/8 Phillips Oval screws. I like to use real glass next to the playing field and Plexiglas on the outside. It just sounds better to me when playing. now reinstall the front playing tray.



There, you are done now. Run about 5000 or so balls thru it and make sure every thing works.

