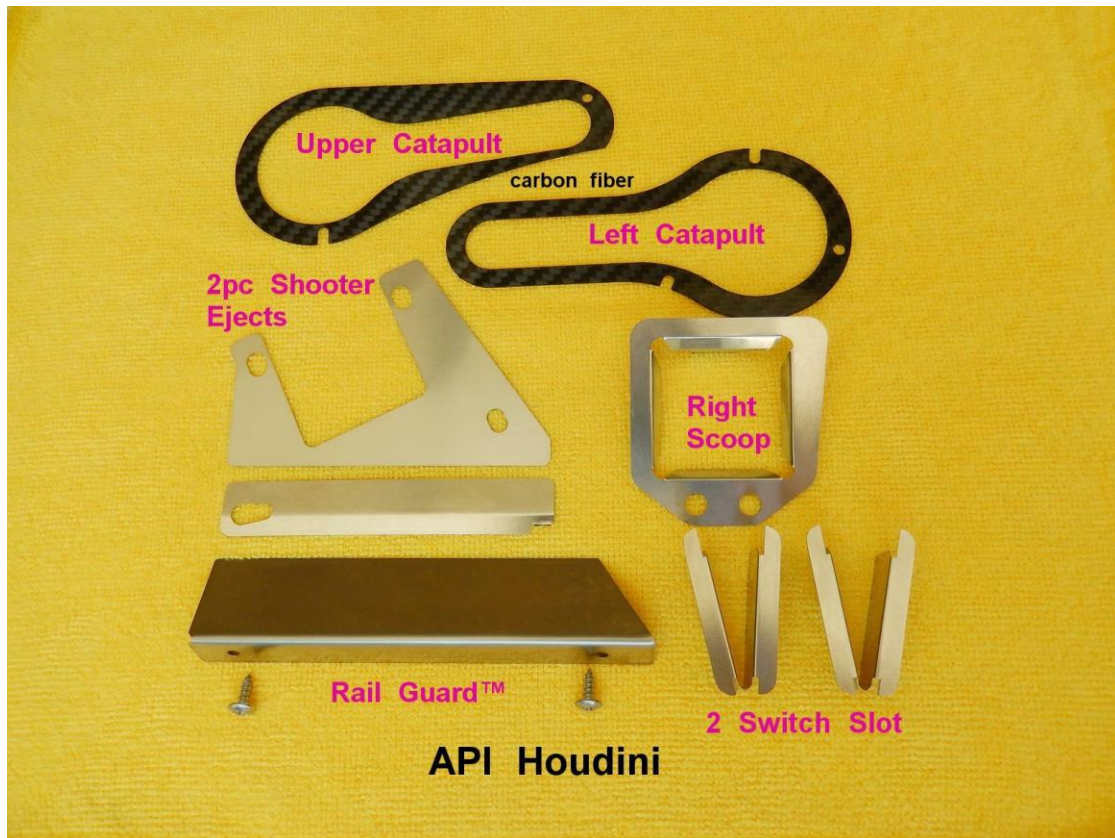


American Pinball Inc Houdini Installing Cliffy's™ protector set

Michael Belofski of <http://www.purcellvillepinball.com> takes us through his installation of Cliffy's™ Houdini protector set



The complete Houdini protector set from Cliffy's Premium Pinball

www.PassionForPinball.com



* All Cliffy's™ protectors have a plastic film on them to protect the finish on the side that is visible. In the instructions below, it is assumed that I removed this film before installation so you should do this as well. Cliff also provides alcohol pads to clean the area around where the protector will go for the ones using 3M adhesive tapes like the switch protectors and catapult connectors. Alcohol is not only a cleaner but is an activator for 3M adhesives



I will add Cliffy's switch slot protectors to both in-lanes since the ball drops at the top of the switch. The open end faces UP the playfield, the closed end nearest the bottom



Right switch slot protector in place.



Left switch slot protector in place.



Now I will work on the scoop protector. It took me a lot longer to do it than it should have. You can look at my pictures as well, but in order to do this at one time, you need to:

- * Remove both plastics - the brown going up and the green/black going down.
- * Remove the scoop hood (deflector)
- * Remove the clear post behind the left side of the scoop (you can see the screw coming through the plastic about an inch above the scoop on the left).
- * Remove the right metal guide.
- * Loosen the black wood rail since the back right of the protector will go slightly under it.
- * Lift up the playfield and take off the 2 nuts and 2 washers to the lane guide on the left side so that the front left of the protector can go under the left lane guide.
- * Remove the VUK (vertical up kicker) under the play field
- ** Once you do all this, it was relatively easy to slide in the protector (after removing the film) and get it under the wood at the back right and the metal lane guide at the front

left. I was able to do this with the playfield standing up so that the VUK can lay on the other coil without falling.

The pictures below have me diverting to the next shiny object so I move between this scoop and the lower rubbers and plunger protector before finally finishing this one scoop protector.



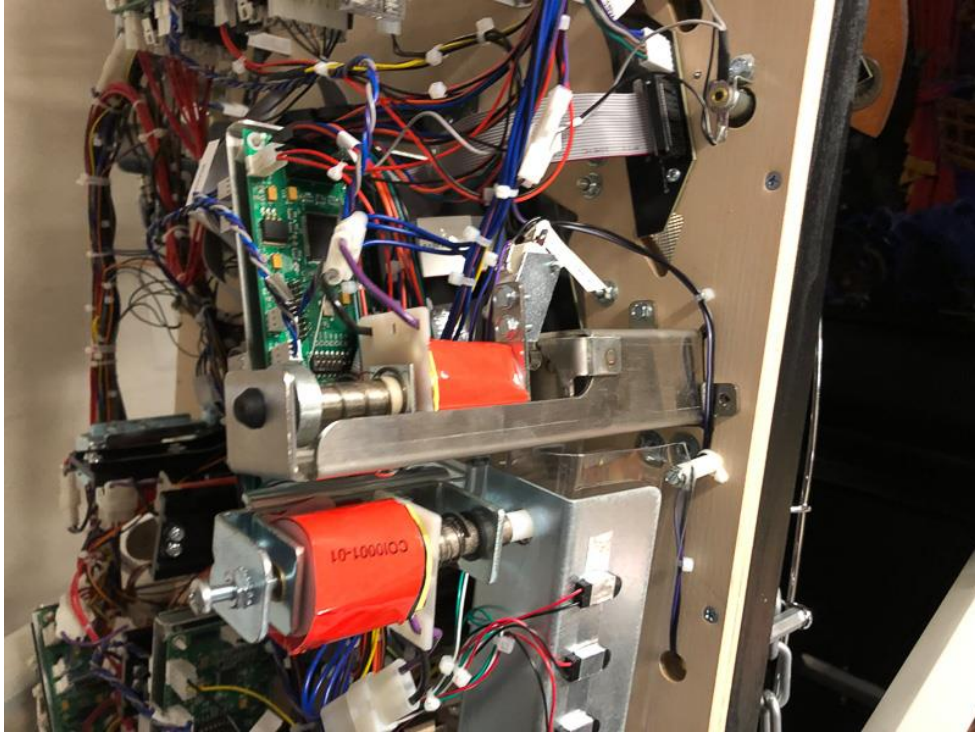
The scoop protector with the plastic film still on.



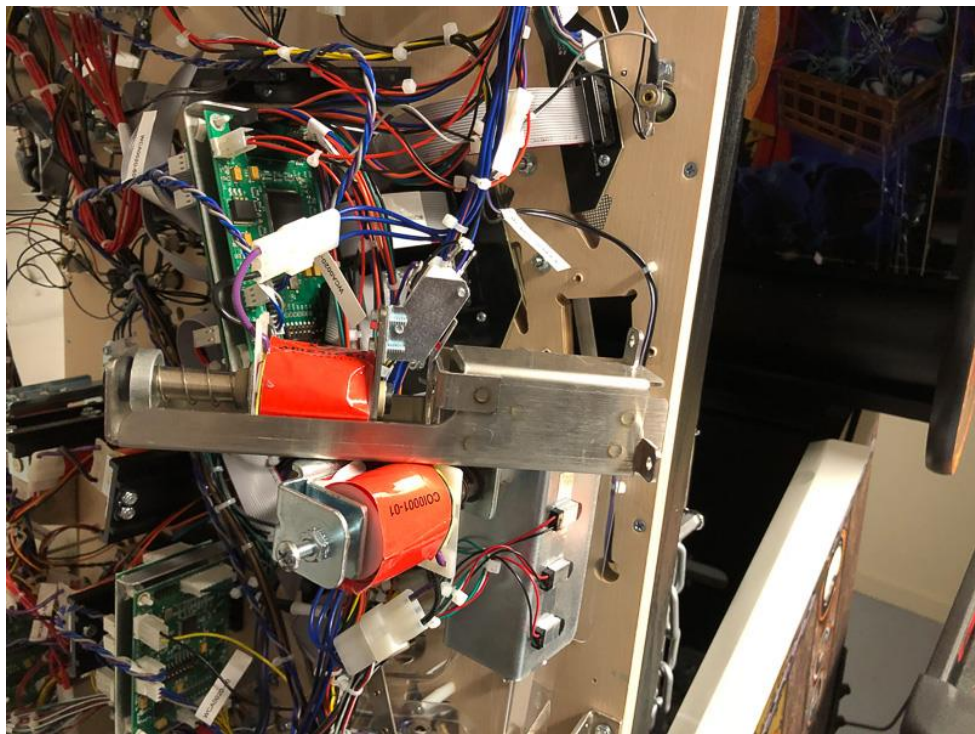
Remove the top plastic going up...

And then the scoop deflector

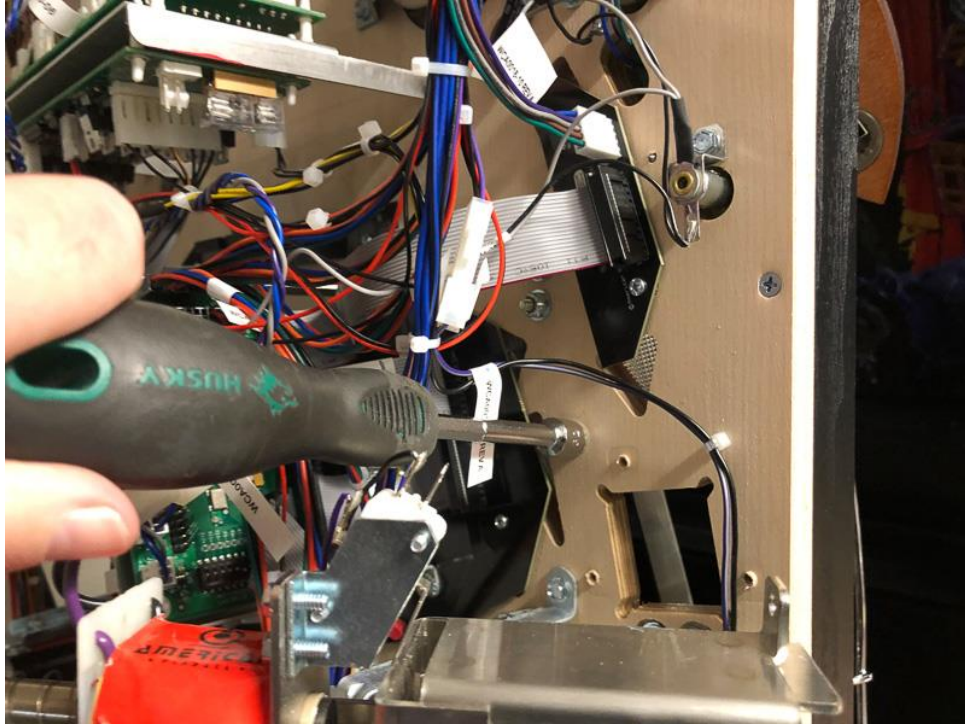




I removed this VUK here but end up putting it back until I take more pieces off the top as I described previously.



Resting on the other coil.



Again, the above steps will be done after you take off all the items from the top first. These are the two nuts and washers holding the left lane guide that the front left of the protector will go under. This is the bottom nut and washer to remove.



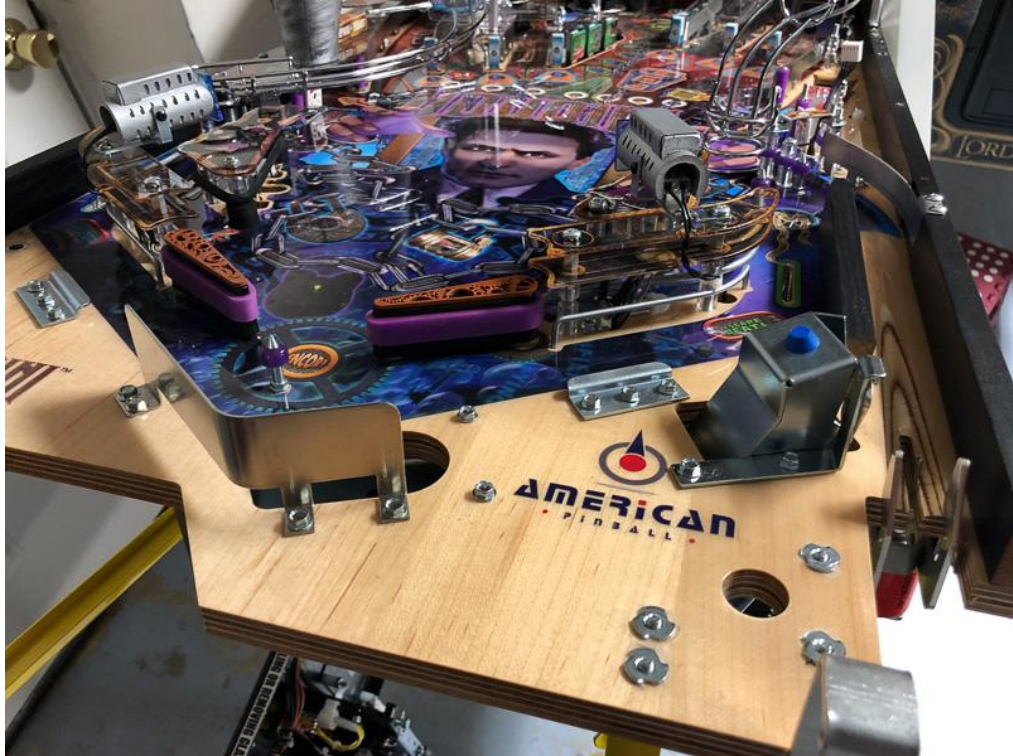
This is the top nut and washer to remove.



Unplug the Spirit light and remove the wood and the lower green/black plastic.



Spirit light removed and lower plastic removed. I also removed the right lane guide



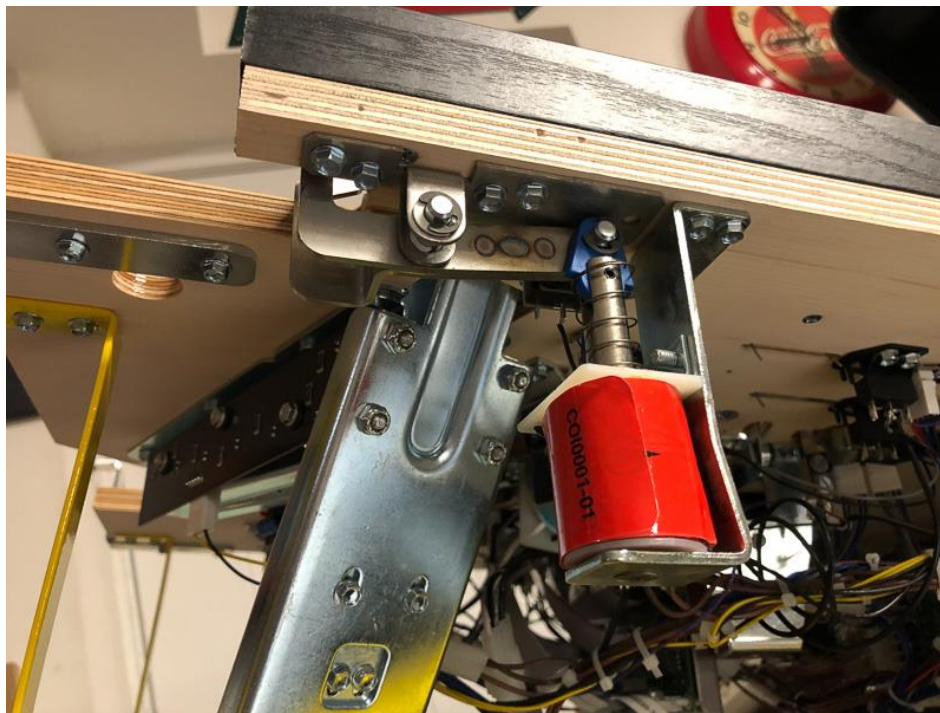
Now I took off the apron to add the protectors for the shooter lane.



After removing the film this will go around the chute on the left and under the wood rail.



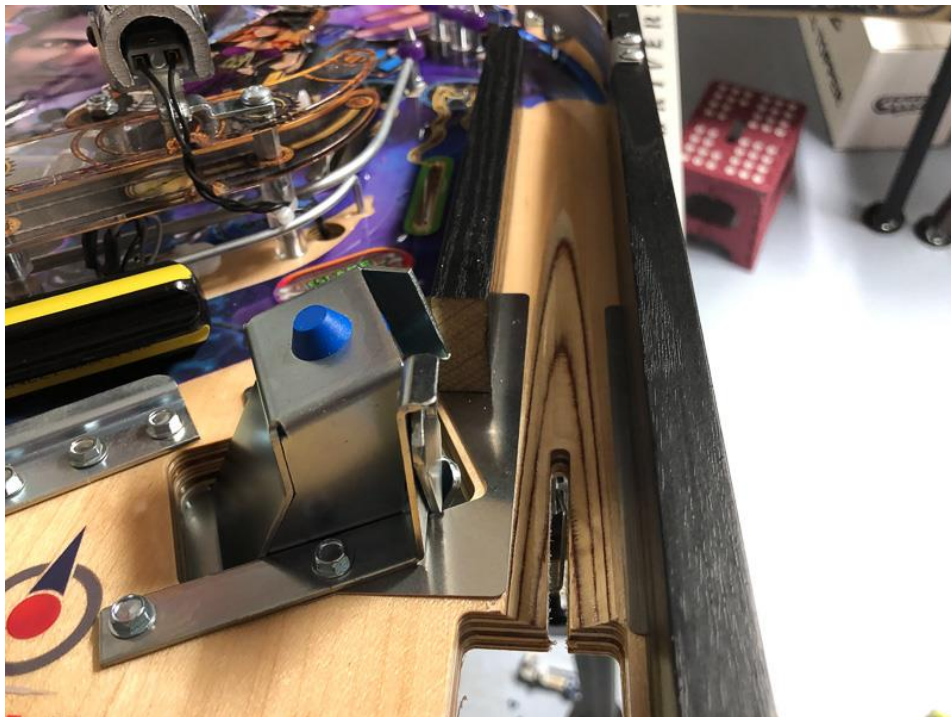
I loosened the screws to the wood below the playfield



To get the right side of the shooter protector, I will remove the mechanism and loosen the wood side rail screws.

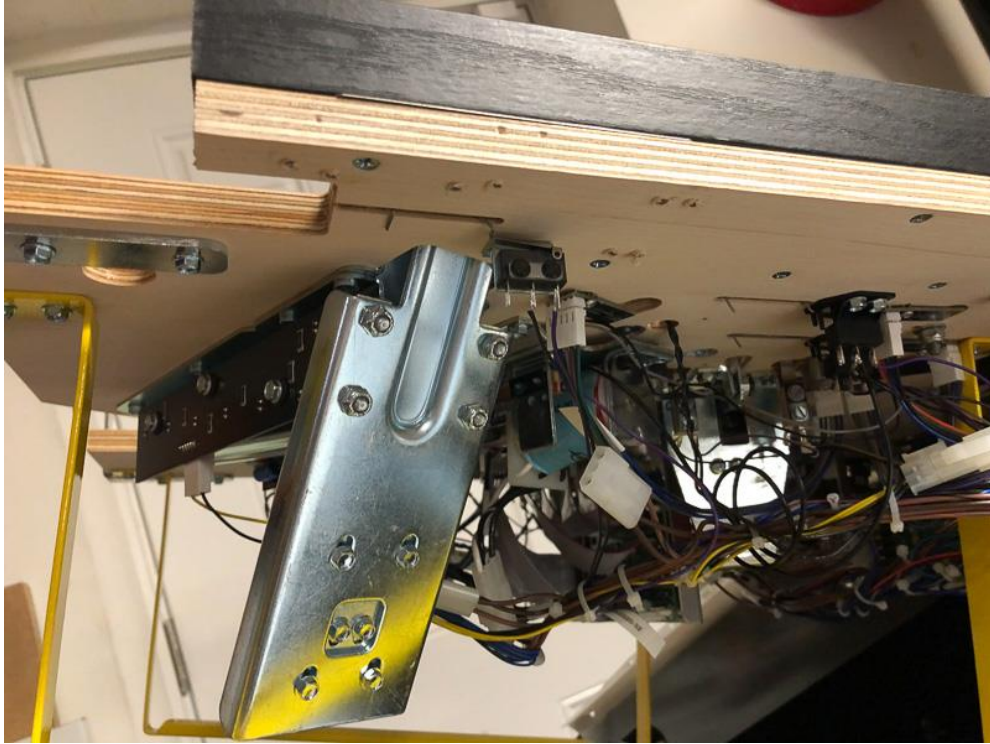


Mechanism removed and wood rail screws loosened.



Remove the screws on either side of the chute and slide protector under the wood rail. Then tighten the two screws.

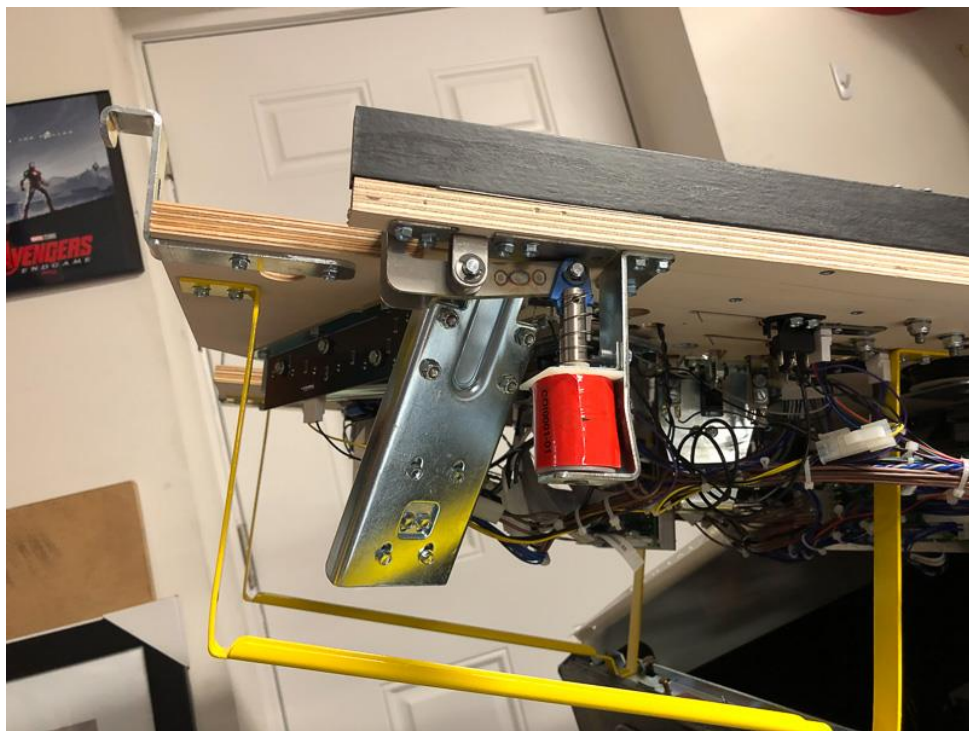
The straight protector on the right goes beneath the right wood rail. There is a hole in the protector for the lowest screw to pass through. Line protector up to the shooter groove edge



Tighten all the wood rail screws



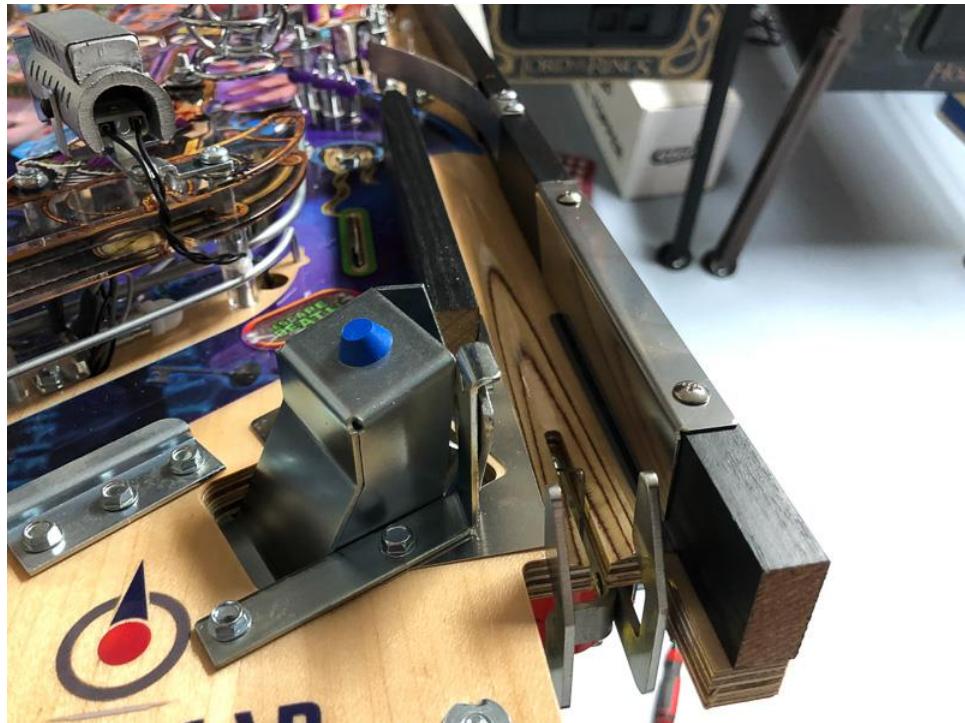
Reinstall the launcher mechanism.



Add the rest of the mechanism. Note that you can see the protector but it is not sticking out.



I add electrical tape just in case. As you can see in all my photos



Finally install Cliffy's™ Rail Guard™ and the shooter lane is fully protected

Back to the scoop protector. (Remember you will follow what I said above, not what I did so you learn from my mistakes.)



Now that the back left post was removed, and the right lane guide was loosened to allow front left to go under, and the wood rail was loosened to allow the back right to go under the wood, and the VUK removed, the scoop fits in snugly but easily. Note that the plastic film was removed from the protector.



In this photo, the right side is up a little. But once the right land guide is added, this will be properly in place.



Deflector re-installed.



Left back post re-installed



Right lane guide added back. Protector now snugly in place.



Plastics added back.

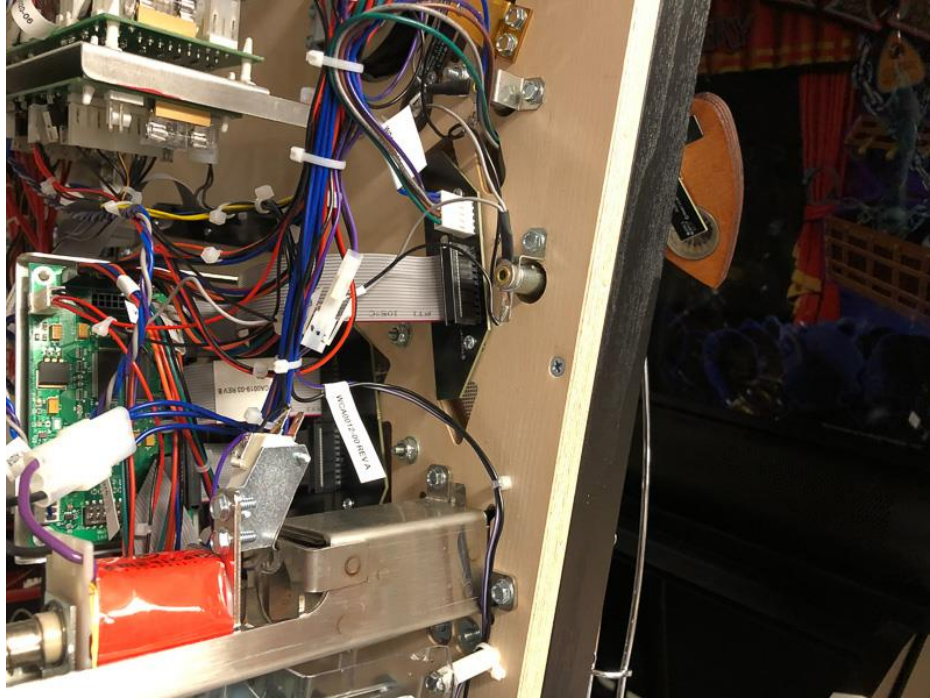




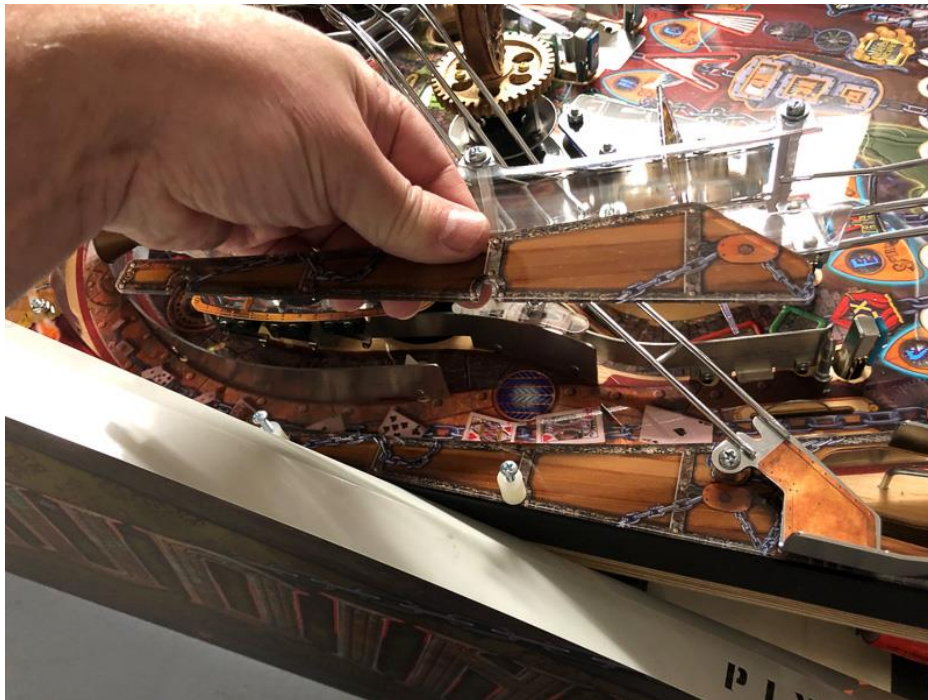
Spirit light added back.



Tighten wood rail screws and re-install washers and nuts to left guide.



All finished with the scoop protector!



Now I will work on the lower catapult protector. Remove the top plastic first.



Then remove the lower plastic.



Remove the milk can lane guide.



Loosen the wood rail on the left since the protector will go underneath.



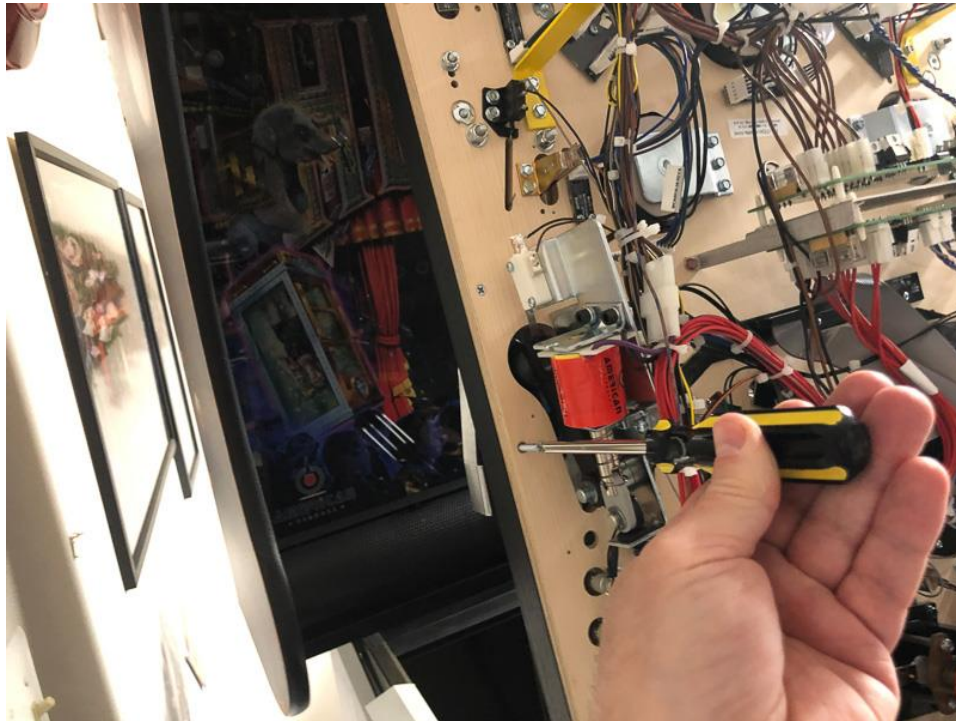
The protector easily fits in and under the wood rail and the hole lines up perfectly. It is obvious which protector is which, but Cliff does label them LOWER and UPPER. This is LOWER.



You can see the protector goes under the wood rail here



Milk can lane guide reinstalled. Also the rubbers to the right were all changed since they were easily accessible.



Tighten the wood rail screws. Place the 2 plastics back on. Done with the lower Catapult



On to the upper catapunt. This top plastic and the one above the coil will be removed.



Both plastics removed.



The protector will go under the left screw of the coil bracket so remove that one and loosen the right screw. Use the alcohol pad to prep the area as mentioned before



Protector in place.

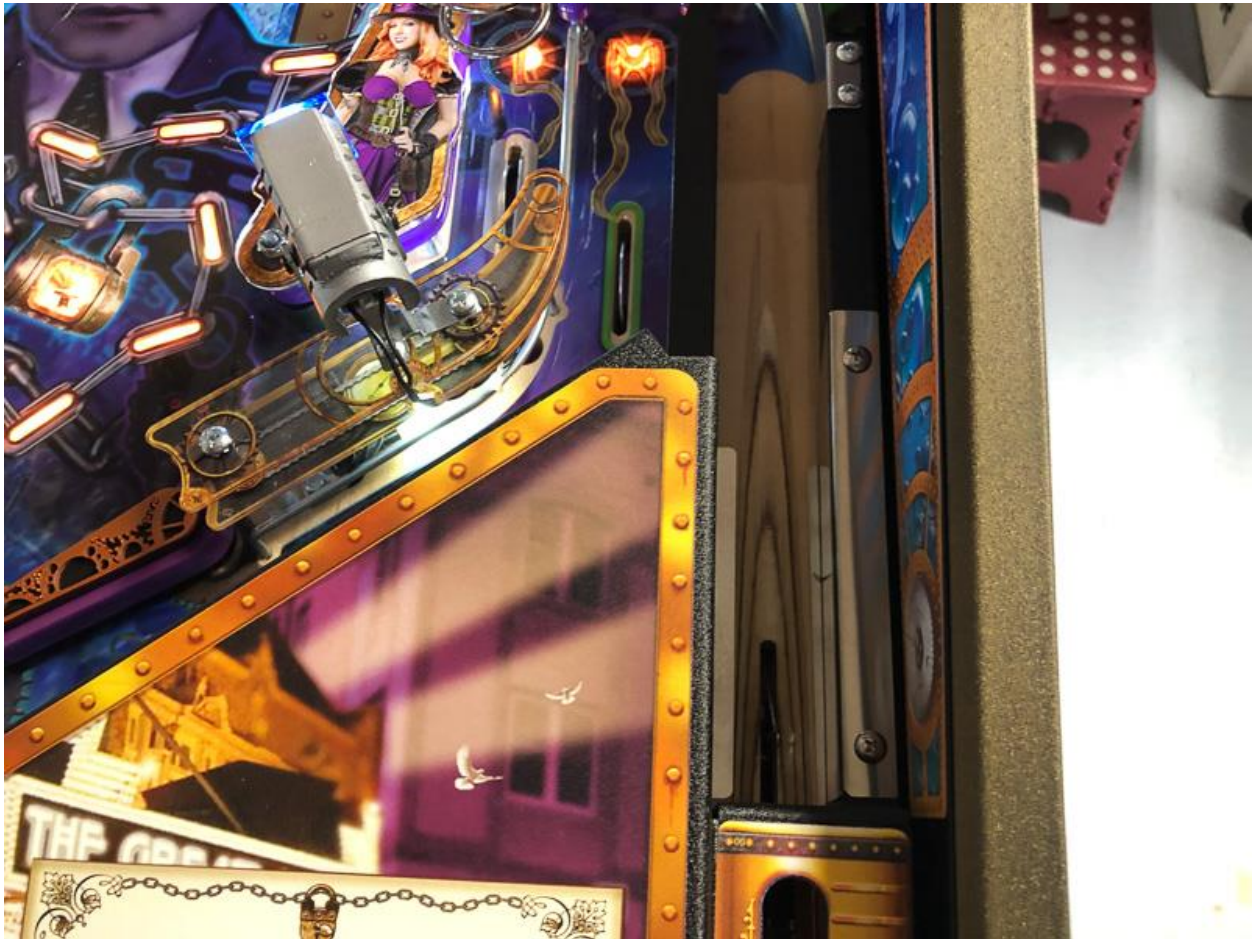


Screws reinstalled and tightened. Beautiful.



Large plastic reinstalled. Then I installed smaller plastic (forgot to take photo)
Finished! Cliffy's protectors installed and doing their job.

Some glamour shots to close out this install guide



The shooter lane



The scoop



The catapults



Guide by Michael Belofski. Protectors by Cliffy's™ at <http://www.passionforpinball.com>