

# SERVICE BULLETIN

**Subject: GS Pinsetter Round Green Belt Maintenance**

**Date: 4/13/12**

**Bulletin No. SB12-3**

This bulletin provides recommended procedures for the maintenance of the green belts in the GS pinsetter. Recently, there have been questions regarding the following two issues.

1. The appearance that the pins are slipping on the outside lanes of the distributor. In this case, the inability of the green belts to ride correctly within the distributor gives the illusion that the pins are slipping on the belts.
2. Green dust being generated in the distributor and shark assemblies.

The following maintenance procedures are recommended to help resolve these issues.



***WARNING! Working on green belts while they are moving in the distributor can cause injuries. It is recommended that the pinsetter be turned off completely during these cleaning and maintenance procedures.***

## **Green Belt Cleaning**

The green belts should be cleaned on a weekly basis. The actual frequency is best determined by observing pin activity as well as monitoring humidity and dust levels within the building.

When cleaning the green belts, we recommend that a diluted solution of lane cleaner and water be used. The dilution ratio should be 12 parts water to 1 part lane cleaner. Use a clean cloth or terry towel that has been dampened with this solution and then wiped over the top surface of the belts. Clean only the topside, because cleaning the undersides of the belts will cause friction and the belts may grab or slow down as they move through the distributor tracks where the belts ride.

If the belts are being cleaned as described above and they chatter or slow down, follow the maintenance procedures outlined below.

## Distributor Green Belt Maintenance

Before performing the maintenance on the belts, it is advised to inspect and replace belts as needed. Belts may no longer be of sufficient size (new belts are 12mm), or they may show cracks or damage that will hinder proper pin handling.

One of the primary indicators of belts being an issue is the belt not moving smoothly within the distributor. This is often referred to as belt chatter. It can happen as green belts age, become brittle, stretch or are subjected to humidity conditions in the pinsetter area that are too high. These conditions will cause an increase in friction between the belt and the belt track.

- Chattering – green belt chattering may be heard if there is excessive friction between the underside of the belt and this area. This may also be perceived as pins slowing down or having loading problems into the pin station areas. In this case the pins may not be slipping but are actually slowing down due to the friction from the belts riding in their tracks.
- Stretching – to check the belt for stretch, lift up on the pair of belts to see if shortening of the belts is needed or to see if one belt has stretched more than the other. When a belt has stretched excessively, you may also observe it sagging lower than the other belt, when viewed from the underside of the distributor.
- Alignment – belt chatter may be accompanied by the presence of green belt dust accumulations within the machine. This can be a sign that the pulleys and belts may not be aligned and straight. Realign the pulleys to get the belts tracking properly and vacuum any green dust or other residue and monitor the results.
- Lubrication – if the issues presented above do not appear to be the problem, it may be useful to apply a small amount of lane oil or 30W lubricating oil under each green belt within the distributor. With the pinsetter turned off, apply one drop of oil to a clean cloth and carefully wipe the inside of the green belt. This oil can be applied once a month – more or less often, depending on the machine's lineage.

**i** **NOTE:** *Never apply oil to the top side of the green belts within the machine. Also, do not apply oil to the underside of the 15 mm green drive belt that drives the transport band or the 12 mm belt that drives the elevator. Doing so may cause belt slippage and slowing of the transport band and/or elevator assemblies.*

## Shark Assembly Green Belt Maintenance

As with the distributor, the shark assembly in the pinsetter requires routine maintenance.

- **Alignment** – the alignment between the pin elevator and the shark assembly must be square with each other. Check the shark assembly and adjust the elevator and shark assembly's position so that they are centered and square with each other and with the distributor. Vacuum any green dust or other residue that may have accumulated and monitor the results.

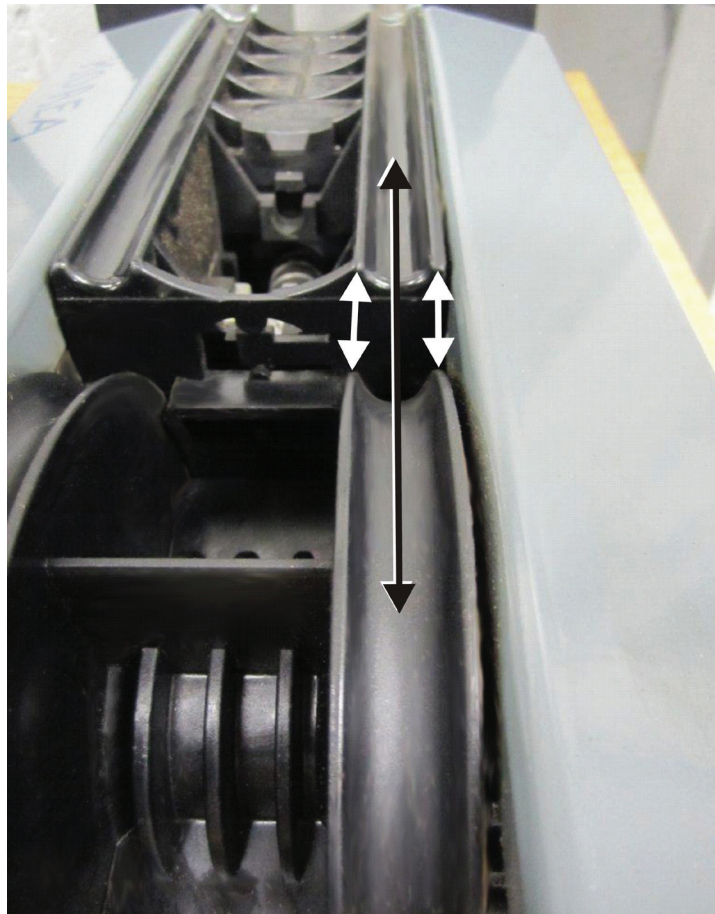
**i** **NOTE:** *The shark assembly is designed to use 12mm belts. Using 13mm belts has been identified as a cause of excessive green belt dust and wear.*

- **Lubrication** – if the issues presented above do not appear to be the problem, it may be useful to apply a small amount of lane oil or 30W lubricating oil under each green belt within the shark assembly. With the pinsetter turned off, apply one drop of oil to a clean cloth and carefully wipe the inside of the green belt. This oil can be applied once a month – more or less often, depending on the machine's lineage.

### Smart Shark Belt Alignment

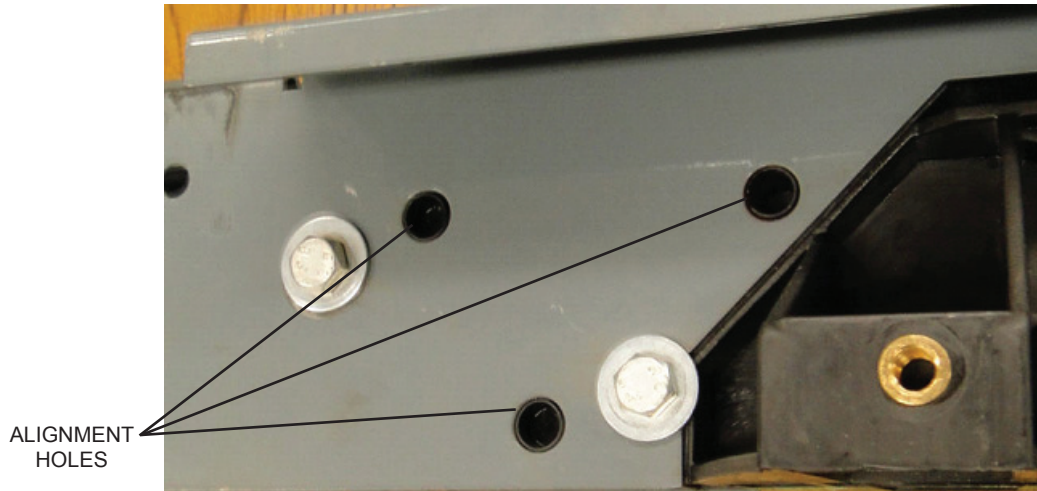
Excessive wear on the belts can happen when the Smart Shark pulleys are misaligned, the metal guide rails are not assembled to the Fin switch housing correctly or using the incorrect size poly cord belt.

Check to make sure the pulleys are aligned with the Metal Guide Rails and Smart Shark Fin Housing belt tracks. The green belts should be aligned with these rails for optimum performance. Refer to *Figure 1*.



*Figure 1*

Make sure the Metal Guide Rails are assembled correctly to the Smart Shark Fin Housing. These Metal Guides have alignment holes for the Smart Shark Fin Housing bosses to fit into and align the Fin Housing to the Metal Guide Rails. Refer to *Figure 2*.



*Figure 2*

### **Green Belt Replacement**

To promote proper pin handling, always replace worn, cracked or stretched belts when needed. The belt lengths are provided in the GS Service Manual and should be followed each and every time a belt is replaced.

Consult the Service section of the GS Service Manual for proper procedures on replacing green belts. A current version of this manual is available for viewing and downloading at [www.brunswickbowling.com](http://www.brunswickbowling.com)

If you have questions regarding the information contained in this Service Bulletin, please contact Brunswick Technical Support at 1-800-937-2695 or 231-725-4966, FAX 231-725-4667, or Email [techsupport@brunbowl.com](mailto:techsupport@brunbowl.com) Visit <http://www.brunswickbowling.com/service-support/tech-support/> for electronic files of this and other Service Bulletins.

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