

Blue Diamond/Blue Pearl drive belt, drive track, and PVA brush replacement

1. Remove the bottom lid assembly, filter bag, and filter screen



2. Loosen (unscrew about a half inch), but do not remove, the screws (4/side) that fasten the sides plate to the body



3. Unhook the side plate locking tabs from the body



4. Pull the side plates away from the body of the machine so there is a small gap between the body and each side plate



5. Remove one wheel tube hub from it's side plate (it's easier to remove the side that does not have belts, R/C units have belts on both sides) and slip it out of it's drive track



6. Remove the opposite side (with drive belt) hub and slip the wheel tube out of it's track and belt. Place the wheel tube to the side



7. Repeat steps 5 and 6 for the remaining wheel tube

8. PVA brush replacement

- a. Remove the hub that is not glued to the hex tube



- b. Make sure brush is very moist and spongy. If it is not, let it soak in a tub of water for about 30 minutes
- c. Slide the brush off the wheel tube (it may help to twist the brush left and right while pulling on the brush, pushing from the bottom may also aid in removal)



- d. Make sure that the replacement brush is completely soaked with water, so that it is spongy
- e. Slide the new brush onto the wheel tube and replace the hub



9. Make note of how the side plates and rotating pieces are assembled



10. Remove the four side plate screws and *slowly* remove the side plate, ensuring that none of the small pieces are lost (if you pull by the point at which the track sits on the pulley, all of the parts should come off with the side plate)



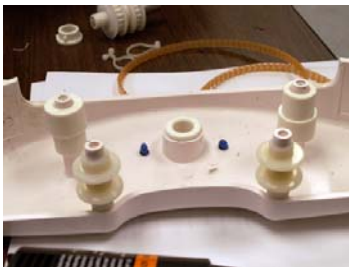
11. Drive belt and drive track replacement



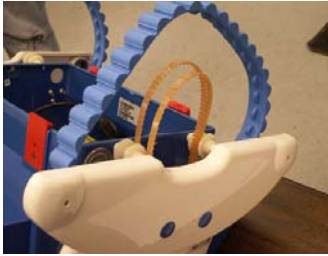
- a. Always check the pulley assembly, tensioners, and bushings for wear and replace if necessary (worn rotating parts will cause more frequent replacement of belts, tracks, and brushes)



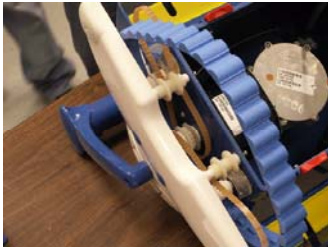
- b. Place the inside pulley bushing on the body side of the pulley shaft, place the belts and track on the pulley cog and install the pulley into the Blue Diamond body



- c. Place the track guides, drive belt tensioners, and center bushing in the side plate



d. Fit the side plate onto the body of the machine, keeping the drive belts taught by holding them in-between the track guides and making sure that the drive track is on the outside of all rotating parts



e. Screw in the side plate screws about a quarter of the way, to hold the side plate in place and slide each drive belt in-between the track guide and tensioner, so that the belt now sits right where the hub of the wheel tube would be

f. At this point, if you are replacing drive tracks, remove the other side plate and replace the track (there are only track guides on this side of the Blue Diamond, the R/C machine's opposite side has drive belts as well and the procedure is the same as the steps outlined above)



g. Make sure that each drive belt is positioned on the correct pulley cog and tensioner (the belt should ride on the larger portion of the tensioner)



h. Before installing the wheel tubes, check to see if the lock tabs need to be replaced (the screws are inaccessible with the wheel tube on the machine)



i. Slip the wheel tube hub into the belt, making sure it is on the correct hub cog, then slip the track over the hub. Repeat step for the opposite side

j. Install the wheel tube bushing into its fitting, in the side plate, and insert the wheel tube pin into the bushing, one side at a time (for R/C machines; the wheel tube must be "rolled" into the bushings, in the side plate, at the same time)

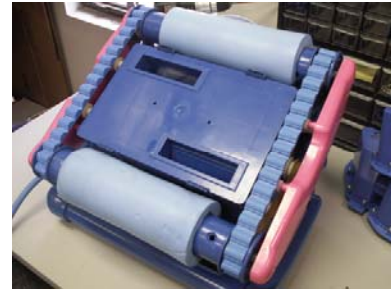
k. Repeat steps for the remaining wheel tube



l. Re-check the orientation of the belts and tracks, then “pop” the side plate locking tab into the body (you may need to push on the side plate so the threads of the screws are visible from the inside of the body; a good smack of your hand, flush on the side plate, should make it easier)

m. Tighten the side plate screws

12. Install the filter screen, filter bag, and bottom lid



13. Run the machine to ensure proper operation (30 second dry test and 1.5 hour wet (tank) test)