



## **Granular Systems, LLC**

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### **Quick Tips TR, TRE, SPX, TRA and TRI**

- Shop Vac any material left in the hopper before washing.
- Use liquid soap when washing the hopper and machine. Run engine to full speed with water running in the hopper, open and close the valve to clean the stainless valve plates. Shut off water and dry the hopper with a towel.
- Use the manifold brush to clean the manifold from inside the hopper. Open the valve fully and insert the brush to clean to the bottom of the manifold.
- Wash the entire machine after every use.
- Make sure not to wrap the fertilizer hose around the muffler.
- Avoid backing over the hose.
- Avoid using lubricants with petroleum distillates. Use dry TFE spray or liquid. Lubricant should be marked as "Dry Spray"
- Secure machine using the welded loops on the hopper tubes and mounting holes on the frame bottom.
- Use ratchet straps, not bungee cords or rope to secure machine.
- Do not open the flow with the engine off or at idle speed, this can cause a clog in the manifold.
- Close the valve and wait for the material to empty from the hose before idling the engine down.
- Reduce the flow rate if a longer and smaller diameter tube is being used.
- Replace and clamp the hose black covering if it has slipped off the fittings on either end of the delivery hose.
- Make sure the grounding wire is in place and the grounding clip is attached to the vehicle.
- Make sure the hopper lid is secure before transporting the machine.
- To check for a clog, remove the vent hose from the manifold and open the valve. Look for material passing by the vent hole opening, if no material is flowing then tap the fitting just below the tank bottom. If material is flowing past the vent hole opening, then tap the delivery hose fitting just before the black protective cover begins, do this while the blower is running to operating speed.
- Run engine to full speed when applying material until you are comfortable that slowing the engine is not going to cause a clog.

## **Applying material with the: Vortex TR, TRE, TRA, TRI and SPX**

- Actuate the Open/Close switch to start the flow of material. To close the valve, hold switch until the valve is completely closed. To reduce the amount of material flowing, just the valve stop slightly.
- Add material to the hopper, fill to desired level.
- Run the engine to full speed, if using lightweight material or small granular sized material the engine speed can be reduced.
- If the engine is running too slow the material will continue to flow out the end of the hose after the valve is closed. Increase the engine speed or reduce flow of material by opening the valve slightly less.
- The extension tubes are used to increase the delivery distance of the material. The smaller diameter tube will allow for longer delivery distance, but at a reduced flow rate. The larger diameter extension tube will allow for more volume of material, but with less delivery distance.
- While using the smaller diameter extension tube it might be necessary to reduce your valve opening. The smaller diameter tube makes the system backup material because of the reduced flow rate to allow for longer material delivery distance.
- The application of material using the Vortex Spreader looks different than applying by hand. Be aware that some customers might want rings or piles of material. Assure the customer that the Vortex method of application is far superior than applying by hand. The Vortex Spreaders apply material to the complete root zone, providing an even feeding to the whole plant. University studies prove that an even spread of material is superior to large mounds or rings of product.
- ***Wet material should not be used in the Vortex Spreaders.*** This material will not flow through the valve and manifold system.
- Try applying different products. Herbicides, insecticides, minor elements, combination products, ice melt, etc. will all flow and perform well using the Vortex Spreaders.
- If we can assist in any way please call, gaining feedback from our customers helps us to build the best application equipment in the industry.

**See our website for video instructions covering all aspects of  
operation and maintenance.**

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

**Questions while operating the**

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