

# Technical Bulletin

## Re: Cold Weather Machine Operation

If you experience operating issues with your dry ice blasting system during cold weather, here are tips on how to solve several common issues.

First, all air sources have some level of moisture in them. And, when a temperature change occurs, condensation occurs at certain humidity levels. These two issues can cause a small amount of moisture in and on some dry ice blasting system internal components. When this moisture is exposed to freezing temperatures, it turns to ice and expands. The ice can freeze up the following components:

1. Actuators - If your machine has been stored in below freezing temperatures for more than a few hours, any moisture present on the actuator piston may freeze. This water ice will prevent the pistons from moving up and down to open the valve and let the blast air through the regulator.
2. Vibrators - The same moisture and condensation can build up in the vibrator or vibrator airline. This will cause the components to freeze and ice in the air line can stop the air from reaching the vibrator. This vibrator freeze up can also happen if dry ice is left in the hopper for extended periods of time.
3. Dosing Disk/Rotor - The feed mechanism can freeze when moisture from the air source or condensation gets between the disk or rotor and the air lock pads. Check for this by opening the side panel as you're pulling the trigger to see if the disk or rotor is turning. If it is turning but no ice is coming out, try emptying the hopper, so you can visually inspect the feed mechanism for water ice buildup.

To prevent freezing situations, store the equipment above 40 degrees. If this is not possible, warm up the frozen components in a few simple steps. If you know you will be blasting in a cold environment, unload the equipment, and place it in a warm area with the panels and hopper lid open for several minutes before blasting. It does not take long to thaw these components. For faster thawing open the side panel and blow air on the frozen items until they thaw.