

# HOW SODA-BLAST SYSTEMS WORK



**Warning:** This section of the manual is designed to give you a general understanding of how Soda Blaster functions. ALL sections of this manual must be read and understood before operating the equipment.

## ADDING ABRASIVE

Abrasive is added through the hole in the top of the Soda Blaster where the Pop-up and its seat are located. When abrasive is added, it flows down through the opening, around the Pop-up, and down to the bottom of the pressure vessel where it will exit through the Multi-Port Fixed Orifice Sleeve in the Metering Valve when blasting is started.

## PRESSURIZATION

Before pressurization can take place in a Soda Storm™ system, the Blow-down Valve must be closed. Then, when a compressed air source (such as an air-compressor) is connected to the inlet of the Soda Blaster and the Inlet Valve is opened, compressed air can flow through the Moisture Separator Filter and Pressure Regulator into the pressure vessel causing the Pop-up (located internally) to seal against its seat allowing the pressure vessel to become pressurized. To blast at pressures less than the minimum required inlet pressure of 90 PSI, the Pressure Regulator is used. When the control handle is activated, the Auto Air Valve and Metering Valve open allowing compressed air & abrasive to flow and mix. The mixture of compressed air and abrasive will now exit the Soda Blaster through a blast hose and nozzle connected to the coupling on the Metering Valve and blasting begins.

## DIFFERENTIAL PRESSURE

When blasting using the Multi-Port Fixed Orifice Sleeve in the Metering Valve, differential pressure may be used to aid in the flow of abrasive. Differential pressure uses slightly higher pressure in the Pressure Vessel than in the Pusher Line to help "push" the abrasive through the small orifices in the Multi-Port Fixed Orifice Sleeve. Differential pressure is achieved by partially closing the Differential Pressure Gate Valve until the Differential Pressure Gauge is reading a slightly lower PSI than the Vessel Pressure Gauge. In addition to using differential pressure, the Vibrator may be used to aid in the flow of abrasive.

## DEPRESSURIZATION (Blow - Down)

When the control handle is released in a pressure hold system, the pressure vessel remains filled with compressed air. The compressed air remaining in the pressure vessel is released when the inlet valve is manually closed and the blow-down valve is manually opened.

