



SYSTEMS, INC.

ENGINEERING NOTICE

- Date:** 5/5/06
- Subject:** EFC Solv-Saver® Settings
- Summary:** The EFC Solv-Saver® has been tested with a 20 color Colorak® to determine the optimum air / solvent pressure settings.
- Setup:** Two setups were used as illustrated below. The first (Figure 1.0) shows the Solv-Saver® placed at the beginning of a Colorak®. The second setup (Figure 2.0) was configured such that the Solv-Saver® is a stand-alone, supplying solvent & air to the Colorak®. For both setups, 40' of 3/8" O. D. nylon tubing was run from the Colorak® to an FS40 rotary atomizer (supply line). Another 40' of the same tubing was run from the FS40 dump line back to a pressure pot, which sent the solvent back to the color rack. Both air and solvent supply pressures were regulated. EFC regulated solvent using Graco Solvent Regulator Part # 214-706. Check valves (Parker # 4F4M-C4L-1-T-SS) were attached directly to the Solv-Saver® air and solvent inlets.

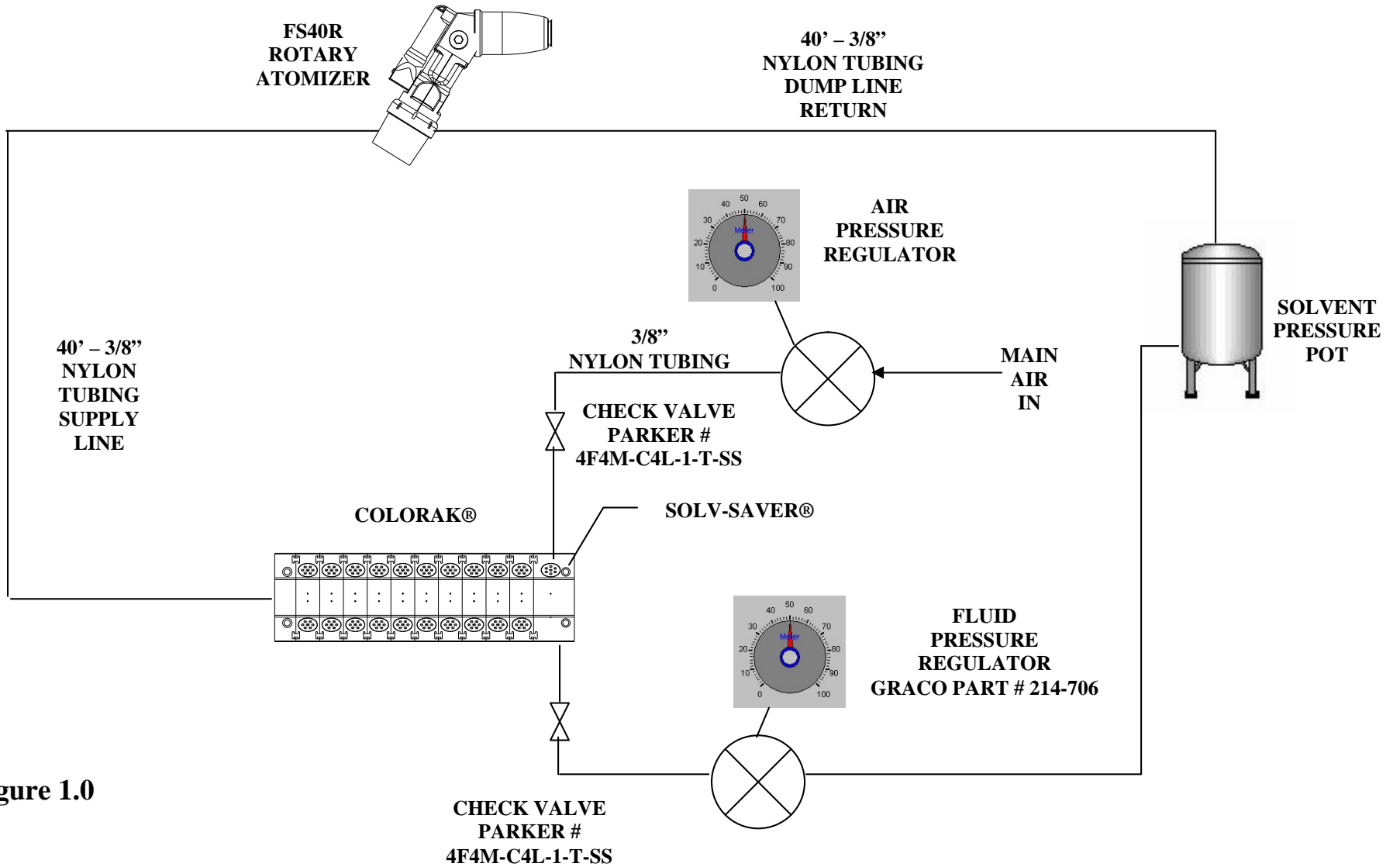


Figure 1.0

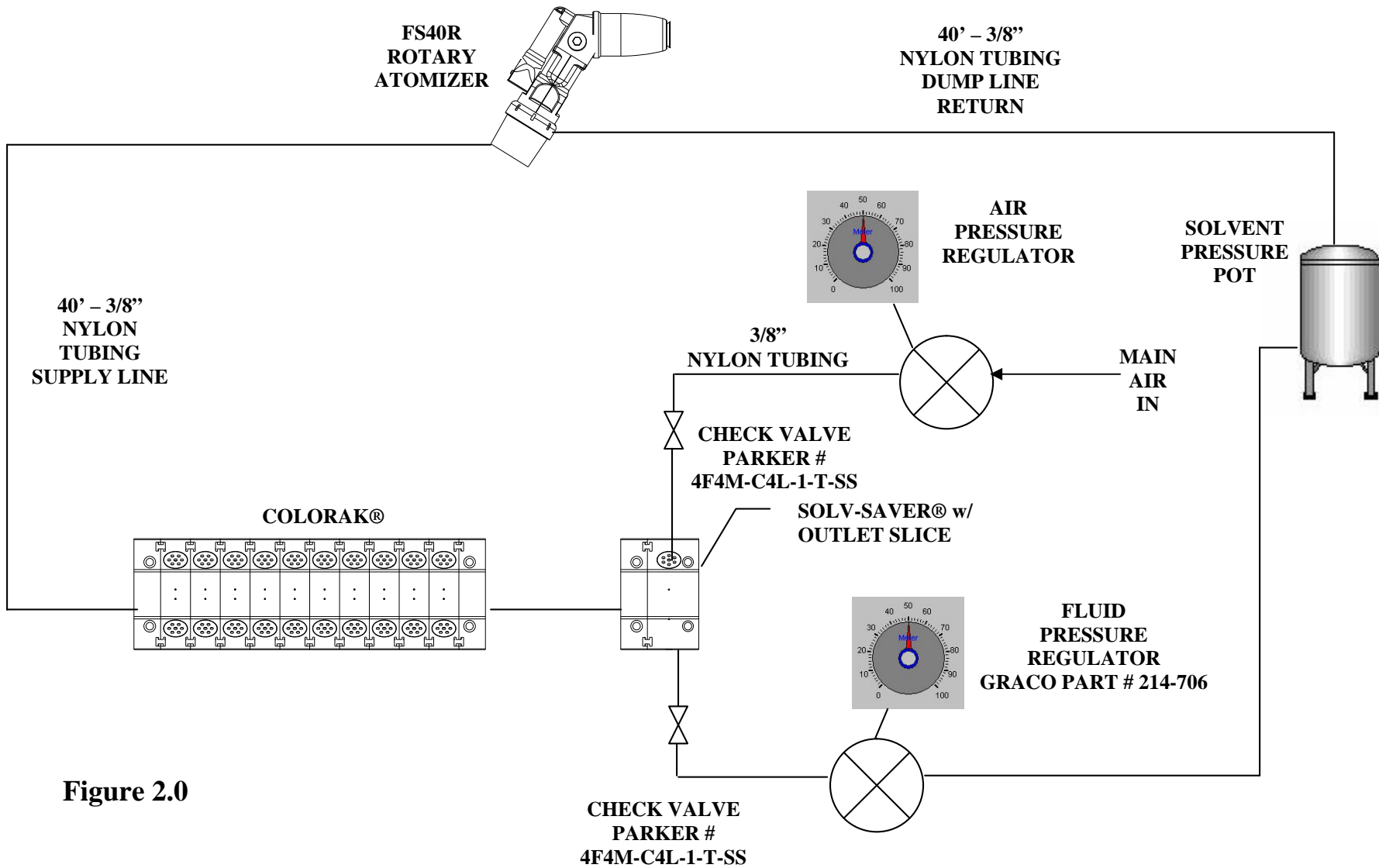


Figure 2.0

Results:

An air / solvent pressure ladder was completed to determine the proper settings to produce the maximum amount of turbulence in the paint and dump lines.

Solvent pressure was first set to 15 psi and increased every 5 psi to a maximum 100 psi. The air supply was adjusted for each solvent setting to determine the optimum air pressure for turbulent action.

For each of the fluid settings, the best air pressure setting proved to be 2-3 psi below the fluid pressure. This provides the maximum amount of solvent/air turbulent action within the Colorak®, supply line and dump line.

When the air pressure is increased just 2 psi above the solvent pressure, the mixture quickly becomes mostly air. As the air pressure continues to increase the mixture ceases to exist and the only air flows through the system.

The opposite also holds true. As the air pressure decreases, the mixture becomes predominately solvent. The mixture ceases to exist as the air pressure drops more than 5 psi below the fluid pressure.

There was no noticeable difference between the setup of Figure 1.0 or 2.0, with regards to turbulent cleaning action.

Case Study:

1. GM Flint Assembly – Solv-Saver® testing completed at this plant during January 2005 showed a 53% reduction in the amount of solvent needed for effective cleaning.

2. Pontiac East Assembly – Pontiac East has been using the above setup shown in Figure 2.0 for six months and has seen a 50% reduction in the amount of solvent usage.

Suggestion: Set up and use the Solv-Saver® according to either Figure 1.0 or 2.0 above. It is especially important to use the check valves as shown in the figures.

Run the solvent at 100 psi and the air at 97-99 psi respectively.

Recommended Solv-Saver® Settings

Fluid Pressure (psi)	Air Pressure (psi)	Hose Length (ft)	Fluid Line Diameter (mm)	Output Result
70	68-69	80	7.0	Turbulent
75	73-74	80	7.0	Turbulent
80	78-79	80	7.0	Turbulent
85	83-84	80	7.0	Turbulent
90	88-89	80	7.0	Turbulent
95	93-94	80	7.0	Turbulent
100	98-99	80	7.0	Turbulent