



Automotive Tier 1 Supplier Accomplishes More with Less Equipment

CUSTOMER

Automotive – Tier 1 Supplier

GRACO EQUIPMENT

ProMix Positive Displacement (PD) Proportioner Platform

CHALLENGE

A Tier 1 automotive supplier needed an automated paint system that could do the work of eight robots with only four. They were about to get in influx of business from another plant. That plant used eight robots to coat jeep hard tops with high viscosity material at high flow rates along their paint line. The Tier 1 Supplier needed to do the same, but only had space for four robots.

For more than 10 years, four ABB robots and four Ransburg Dynaflo 2K units had been running low viscosity, two-component primer for lower volume items. The old equipment needed to be replaced within the same footprint. They could not add more robots without completely changing the paint line, which was not an option.

The paint line manager originally wanted a positive displacement, two-component system like FANUC America Integral Pump Control (IPC) or the Ransburg RCS 2 Ratio Control System. Both systems could run low viscosity primer at low flow rates. But their testing showed that neither could handle high viscosity material at high flow rates. With only four robots, flow rates needed to be upwards of 800 cc / minute. This put pressures above 200 psi, causing pressure faults.

They needed a system that could:

- Run low viscosity primer at low flow rates to meet current production needs
- Handle high viscosity spatter material at high flow rates to cover new, incoming demands

SOLUTION

The paint line manager went to Graco's application lab in Minneapolis to see how the ProMix Positive Displacement (PD) Proportioner Platform handled the new spatter material. The ProMix PD2K pump managed flow rates all the way up to 930 cc / minute without faulting. Finish quality also met specifications without fault.

The PD2K allowed spatter and primer materials to have their own pump sets. This made for fast color changes.

RESULTS

Since the ProMix PD can manage high viscosity and low viscosity materials at full flow rate range, the paint line manager found they could accomplish more with less equipment.

The Tier 1 automotive supplier upgraded its automated paint system with four ProMix PD2K pumps and four FANUC P-250 painting robots.

To help paint line operators successfully manage and maintain the new system, their Graco representative and distributor have done several on-site training and follow-up sessions. Such support has helped them troubleshoot and improve the automated paint line.

After more than two years, the equipment continues to run low viscosity primer and high viscosity spatter material, meeting production demands.