DIVERSIFIED CHEMICAL TECHNOLOGIES, INC.

DCT Operating, Inc.

Case Study

Project Management, Delivering Value through Process Improvement

Customer: STELLANTIS

Challenge: Cleaning Automotive OEM Transmissions Mfg.

- Performance: Improve cleaning of subassemblies & parts comprised of ferrous and non-ferrous metals
- Complexity reduction: 3 mfg. locations, multiple products
- Process alignment: Compatibility w/ post cleaning processes

DCTO Project Management Framework

1. Project Selection
2. Application Survey & Lab Work
3. Stakeholder Review & Approval
4. Pre-Trial Plan
5. Post-Trial Plan
6. Initial Conversion
7. Service & Support

Kick-Off… *…Jointly Defined Timeline for Execution…* *…Ongoing Support & Value Delivery*

Approach:

- Applications included a variety of conditions & requirements: Removal of coolants, metalworking fluids, and light oils with broad variation in washer resonance, temperature, and fluid concentrations
- DCTO's commercial, technical, and product development team partnered with the site Chemical Manager & key personnel from each mfg. site; Extensive process reviews were conducted for the various applications
- A design of experiments (DOE), conducted in DCTO labs, led to the optimized formulation for Prowash 256C

Solution: Prowash 256C

- DCTO designed a solution to address the cleaning requirements, while also designing for compatibility with post cleaning operations: heat treating, additional assembly, next stage machining, in-plant storage & rust-protection, eliminating the prior "sticky" residue, to improve the post cleaning assembly operations.
- Lab validation was backed by Extensive trials, where 256C demonstrated a wide operating window across the varying concentration levels, metals, resonance times, and temps from 80-150oF.
- Enabling product consolidation, while meeting EHS requirement of no phosphates and certain amines

Value Delivered:

- DTO designed & implemented a total service program including operating protocols, work instructions and process manuals for proper control of key process parameters across all pertinent systems
- Prowash 256C, along with the service program, **resulted in sustainable operating cost savings exceeding $310,000** associated with cleaner product consolidation and reductions in scrap, maitenance, and downtime.

For more information, visit us at www.dchem.com