

## Zero Defect Sub-Assemblies Requirement Met For Manufacturer Seeking Improved Quality

### Packaging Industry Manufacturer Sought Partnership with The Hope Group

When a forward-thinking packaging industry manufacturer approached The Hope Group with a challenge to improve quality, speed up delivery, reduce inventory, and shorten machine build time, the engineering and fabrication team at The Hope Group came through with just the right solution. The Hope Group assumed responsibility for assembling the critical sub-assemblies used in the OEM's manufacturing process.

It's not uncommon for customers to ask for a better way to get components to their assembly floor with the intention of reducing the number of parts they have to order, receive, inventory, and then assemble. This was a classic case of an OEM seeking a "just-in-time" (JIT) solution and with our deep experience with pneumatic assemblies from Parker, we were able to help solve their problem.

#### Project Scope and Documentation

The project scope involved 20 different pneumatic valve configurations used among the various pieces of machinery that the customer was assembling. Working closely with the customer, The Hope Group team developed a thoroughly documented process to cover the component buildup of the mechanical assembly, to validate component functionality, and to test the electrical solenoid actuation and

air pressure leak check to ensure "zero defect" assemblies. Special nameplates were created with assembly part numbers and special serialized numbers to identify manufacturing date, lot, and purchase order, to provide traceability.

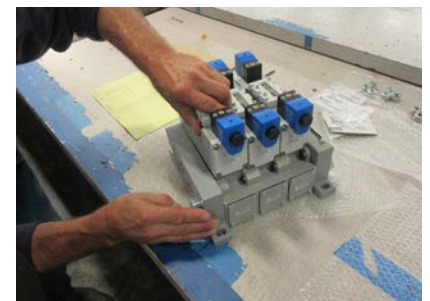
The customer is a manufacturer of thermoforming machines, which are used for producing blister and clamshell packaging in a wide range of industries. The thermoforming process starts with plastic film which moves from a roll onto the inline equipment and through the heating section. The heated material advances into the forming section using pneumatic valves to control air pressure and/or vacuum to force the plastic onto a mold. It then proceeds to another station where formed parts are die-cut by either hydraulic or electromechanical actuators.

#### Partnership Results in Improved Quality

With The Hope Group providing custom pneumatic valve manifolds, just-in-time, to its customer, the result has been a measurable improvement across the board. The customer now orders from a "library" of their internal part numbers and the sub-assemblies are shipped and installed into the machines without further testing, because the process has improved quality, eliminated rework and shortened overall machine build time.

Since initial implementation of this new partnership, sub-assemblies have

grown to over 30 configurations. As part of the new process, The Hope Group now maintains local stock of parts to make up last minute assemblies. Previously, when all parts were shipping direct from the factory lead times could stretch from six to eight weeks.



#### Documented Process

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#### Just-In-Time Delivery Met

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