



## **Magnys Helps General Motors Save Time and Money In Sequencing/Containerization Program**

### ***Introduction***

For automakers and their large integrators, the process of delivering parts at the right time so they can be assembled into a system or onto a vehicle can be a daunting challenge. Before they can begin building systems or vehicles, companies must address a range of sequencing issues, including developing custom containers to bring parts from suppliers to the plant and from the loading dock to individual work cells.

Plant management must be able to manage the flow of parts into the facility or risk costly production delays; plant floor personnel must be able to quickly locate containers with the parts they need and deliver them to the right location within the various work cells.

One of the key success factors in a smooth launch program is the design, engineering and validation of the containers in which parts are shipped and stored. Properly managed, this can contribute significantly to efficiencies in manufacturing and within the supply chain –from component suppliers to integrators, from integrators to OEMs, and on the assembly floor.

### ***Challenge***

As one of the world's leading manufacturing companies, General Motors is acutely aware of the importance of supply chain and logistical efficiency. That's why when it was time to plan the launch of the GMT 900 program, GM's North American Containerization group turned to Magnys for expert project management and engineering services.

The program kicked off in early 2006, with a Magnys team responsible for managing the process of designing and engineering sequence containers at four assembly plants for GM's next generation full-size pick-ups and SUVs.

Magnys was asked to create a container plan and product that met all General Motors specifications and requirements, including "Bill of Container" guidelines. Specifically, we were responsible to:

- Manage all container projects
- Ensure performance of all aspects of container engineering and project management
- Manage outside prototype supplier
- Generate 100% on-time delivery of 100% damage- and defect-free containers, and successfully validate them
- Maintain data and records per GM requirements

- Improve container designs in conjunction with design prototype service supplier
- Maximize re-use of existing container fleet whenever possible
- Continuously identify ways to reduce the cost of containers
- Identify and secure additional engineering and logistics savings wherever possible
- Provide the management and/or engineering for all or select project work elements integrating within the processes of GM functional departments

Once the containers are purchased, the information is fed into another Magnys program at General Motors –*Plan for Every Part (PFEP)*.

The database captures and stores in one place all relevant component information from a variety of internal GM databases on every part that feeds into 26 manufacturing facilities, from component dimensions and where the part was manufactured, to how and where it ships, as well as all supplier contact information.

PFEP also includes a timeline that tracks the status of parts validation. This allows GM to know at any time how many parts have been validated for a vehicle program, how many are in process and how many parts have not been contracted. With this information, GM can identify problems at a much earlier stage, eliminating the need to rush engineering teams to plants to validate parts late in the launch. This streamlines the planning process, improving decision making.

### **Results**

The results of our programs for General Motors are remarkable.

To-date, our General Motors containerization program has involved planning for more than 2,400 racks at four plants in the U.S. and Canada, while the *Plan for Every Part* has centralized information on more than 140,000 parts.

The General Motors North American Containerization group set an ambitious stretch budget reduction of more than 46%; after purchasing racks for one plant and prototypes for the others, we project that we will come in 17% lower than the stretch, and more than 56% lower than what GM has historically spent. The *PFEP* team is improving the quality of information and doing it with a savings of more than 40%.

Furthermore, the project management and engineering expertise at Magnys will continue to produce savings at General Motors, as we will expand our programs at additional GM sequencing centers in the months ahead. This is another example of how we add value to our customers' manufacturing operations.