

## Case Study



Ford's resequencing facility in Atlanta receives painted car bodies on skids from paint operations and delivers them in sequence to final trim. The loads are stored in the ASRS in the single deep position using only the rack locations that are between Storage and Retrieval Machines (SRM) aisles. If one aisle is taken out of service, all of the loads in that aisle can be accessed from the adjacent aisle using the SRM's double deep capacity.



### Scope of Work

Scope of work for Dematic includes: four SRMs, conveyor control hardware and engineering, rack supported storage, general construction, and overall software control.

### Storage Structure

The four aisle rack supported structure has nine levels and nine bays which provides a maximum of 648 load positions. Each storage position holds one vehicle (Taurus/Sable) body on a skid.

### SRM Machines

Four double mast, double shuttle SRM machines service the rack system. Each machine is designed specifically to handle a vehicle body on a skid weighing up to 2,200 pounds.

### General Construction

All construction activities were managed by Dematic. General construction includes a two point one million cubic foot high rise ASRS building. This 25,000 square foot facility includes fire protection and a computer control system.

### Conveyor System

This fully automated conveyor system consists of a series of two strand chain conveyors, roller conveyors, turntables, transfer conveyors, and a hydraulic lift responsible for delivering car bodies to and from the ASRS. This conveyor system ties into the existing conveyor delivery from the paint shop to the trim shop. Three Allen-Bradley PLC's manage the control of the conveyor.



## Controls

All controls were designed and programmed by Dematic. The computer system tracks inventory, selects aisles, manages the conveyor, controls the safety gates, schedules the vehicle retrievals based on a Model Rotation pattern and a sequence number, and provides all required recovery capabilities.

## Benefits

The resequencing facility provides Ford Motor Company a minimum of 98% in-sequence delivery to trim operations. This allows material inventory to be significantly reduced at the assembly line and provides stable scheduling, leading to a better line balance and overall facility use. Also, In Line Vehicle Sequencing (ILVS) helps Ford suppliers to manufacture and ship within established material requirements, supporting overall quality and productivity.