

Commercial and Logistics Management



GALION Automotive supports in their entirety the operational processes of the distribution chain in the world of the automotive component supplier (Tier 1 and below).

The aim of *GALION Automotive* is to respond fully to the requirements of automotive OEM's while enabling and encouraging the logistics performance of the supplier.

GALION Automotive is founded on the use of labels that respect the requirements of OEM's while also supporting the GALIA/ODETTE international label.

Inventory flow can be managed at the level of individual pieces and containers. Procedures are based on the use of bar code readers - fixed terminals, portable terminals or radio devices.

The full EDI cycle is supported.
GALION Automotive provides its own EDI translator to handle inbound and outbound messages.

The Major Processes

Management of Quotations

The system allows the creation of quotations for customers.

A quotation can relate to products not yet set up on the engineering database.

A request for codification can be generated if necessary.

If a quotation is accepted, it can be conveniently converted to an order and archived.

Quotation history is available for enquiry.

Discrete Orders

Database

GALION Automotive is capable of supporting a complex customer hierarchy, including the notion of customers groups, customers, customer sites, delivery addresses, invoicing addresses, logistic contact addresses, banks, etc.

Different order types can be defined.

The system allows the management of pricing by customer, customer group, and delivery address.

Complex discounting rules (e.g. highest, accumulating, cascade, minimum price) are available. Promotions and catalogues are supported.

Orders for Commercial kits can be managed.

Principal Functions

Order Entry is rapid. The user selects the customer and the order header is immediately generated with information defaulted from customer information.

To create an order line, the user enters a "product" code. The system searches customer item codes, then catalogues and finally internal item codes. Having found a match the quantity is entered. The line is established (again using pre-established defaults) and the user moves on to the next line.

This process has been proven to achieve instantaneous responses with the entry of orders of up to 400 lines.

Within the order entry process, the order can be immediately picked, despatched, invoiced and closed.

Customer Contracts

Customer Database Structure

The customer structure is the same as that for discrete orders, and is that specified by the ODETTE standard in support of the requirements of the automotive industry (Buyer, Consignee, Final delivery point, Additional destination).

Principal Functions

The contract header by default is populated with data from the customer database (payment terms etc).

The contract header defines the legal entity responsible for the sale of the products under the terms of the contract. This allows the realisation of third party type commercial relationships, where company "A" makes products and despatches them to customers under the name of company "B".

At the next level the contract defines information relating to the supply of individual products

This allows the definition of logistic rules for the supply of each product - calendar, quantity rounding rules, code conversion rules, rules for engineering change management, revision levels with effectivity date, packaging, identification parameters, and EDI integration parameters.

Contract statuses can be used to reflect the different phases in the evolution of the contract.

The default status makes a given product active within the contract. Other statuses, however, can allow the monitoring of the initial sample approval phase, or the blocking of all despatches in case of problems (e.g. quality problems).

The logistics rules information for each product is accompanied by pricing data defined by date. These prices can be decomposed into pricing elements (e.g. materials, transport).

Pricing elements can, if appropriate, be defined as automatically amortisable (for example a tooling investment of €15000 may be amortised at the rate of €1.5 over the first 10000 pieces).

Price management supports modification by date. For price changes applied retrospectively, a retroactive invoicing function is provided.

Integration of customer demand

Customer schedules may be of the short-term call off type (e.g. EDI DELJIT messages) or of the long-term type (e.g. EDI DELFOR messages). Both follow the same process.

After EDI translation, inbound customer schedules are created automatically in the GALION internal format. It is possible to create manually these inbound schedules for those customers who do

not use EDI or where EDI is not operational for any reason.

These inbound schedules are subjected to a verification that the quantities are consistent with agreed logistics rules and they are archived for historical analysis purposes.

Inbound schedules are then posted to the "live" schedule. At this point, other controls are applied, for example to ensure that :

- The date of requirement is not in the past
- A despatch for this date is not already in progress.

The "live" delivery schedule contains not only the despatch related information for the products, but also the specialist data, such as

- Data necessary for identification
- Data linked to the different logistics rules of individual OEM's (e.g. GPI, L3P, GM pick-up sheet numbers, order numbers, release authorisation numbers).

As soon as the delivery schedule is updated, it is possible to despatch immediately.

Delivery schedule management allows the user to manage the ahead/behind situation, manually or automatically to apply schedule re-alignment (to resolve ahead or behind situations), and to monitor shortage situations.

Forecast Management

GALION Automotive can define articles as planning items. A planning bill of material allows the definition of the sold articles taking into account the notion of the share of the possible market.

It is possible to define forecast scenarios and to define, by period, forecast quantities for each planning article by customer/plant/ warehouse for a given consigning site.

Each forecast scenario corresponds to a period and a source of forecast. A given forecast scenario could (say) allow the overriding of firm or forecast schedule releases beyond a given horizon. For example one might choose to replace all customer-generated demand beyond a 60-day horizon with one's own internal forecasts.

This mechanism can be multi-layered. For example one could, by a second forecast scenario, replace the demand in the first scenario that falls beyond a 300-day horizon. With these two forecast scenarios in combination with actual customer demand, the system has the information that it needs to establish a forecast budget.

After despatch, the system records the quantities actually despatched against the forecasts, thus allowing the monitoring of forecast variances.

Management of Physical Flow

GALION Automotive provides a full inventory management system (for full information see the Inventory flow management fact sheet)

1. The structure allows the management of inventory at four levels: site, warehouse, zone, and location.
2. Flow can be managed at article or batch/lot level
3. A unique serial number allocated to each package manages the inventory flow. Packages can be managed at the packaging unit level (e.g. small boxes) and handling unit level (e.g. assembled pallets).
4. Because each movement of inventory is managed (by label number), the system guarantees a high level of inventory management reliability.
All transactions can be effected using bar code reading terminals - fixed terminals, portable or radio devices.
5. To ensure reliable product identification, the system manages the complete cycle of label printing and (where necessary) reprinting.
6. GALION uses standard label formats.

Reusable Containers

Parameterisation of reusable containers

As a prerequisite to the management of reusable containers, it is necessary to define the entities for packaging, packaging items and code conversions for customer packaging codes.

GALION can manage complex structures of packaging. A packaging bill of material can be defined (pallet, tops, inserts) together with parameters that allow the system to calculate the usage of the package elements in the context of the actual packaging actions undertaken.

Management of reusable containers

All packaging movements are created as an automatic by-product of inventory transactions.

As each transaction is effected by means of reading the barcode of the unique package label serial number, the system automatically detects that a reusable container is associated with the package and the package inventory movement is simultaneously generated.

If it is specified that the packaging should further be monitored while at the customer site, then the packaging will automatically be transferred to an external packaging management site (linked to the customer site) at time of despatch.

When, in the due course of packaging rotation, the empty packaging is returned, the receipt of the packaging is transacted in order to transfer it back from the external site to the normal despatching (or manufacturing) site.

The Picking Process

The first step in the despatching process is the creation and printing of the pick list. A pick list typically specifies the products to be despatched to a given customer site on a given date/time. Pick list generation can also take into account specific customer requirements (e.g. GPI - despatch note numbers are needed on each packaging label, unique despatch notes by pallet, etc).

The pick list specifies for each article line, the item availability, the available containers, and whether the current labels on the containers will be in conformance with the requirements of the customer.

The items suggested on the list will be those available in stock, whether labelled or not. In general, containers are proposed using a FIFO method.

The second step is the picking process itself, a process that also includes any necessary palletisation.

The user makes this happen by reading the unique serial number on each package. The system will know (from the database) whether palletisation is necessary. If it is necessary the user will be guided to allocate each packaging unit to an appropriate handling unit (e.g. a pallet). The system will know whether the user is creating mixed or homogeneous handling units and will create the handling unit label accordingly.

When the package serial number is read, the system is also able to detect whether the package is labelled in accordance with the requirements of the customer. If it is not, then the user will be guided to re-print the label and a new correct label will be automatically produced for the user to replace on the package.

As part of this process, the packages are automatically transferred to a "picking" zone

The Loading Process

Loading is the process of recording the placing, in the transport vehicle, of the handling units created during the picking process. Loading can be realised with or without re-reading of the label on each handling unit (e.g. pallet).

The user can verify that all handling units have been correctly loaded.

When the load is finally confirmed, the despatch advice is produced automatically together with the EDI Advanced Shipping Notification (e.g. DESADV message), if required.

The major controls relating to customer constraints

In order to conform to specific customer requirements, Galion is capable of automatically applying certain controls. Example include

- L3P - Homogeneous handling unit by zone/date/time of consumption
- PCA - allocation of order numbers
- Release authorisation numbers

Collection by Carriers

Parameterisation

Galion *Automotive* allows the definition of carriers, one of the logistic parameters associated with a specific delivery route.

So that the system can calculate transport costs, it is possible to define costs based on weight ranges and geographic zones.

If the system is parameterised to generate transport requisitions, the system will send these automatically to the carrier.

Transport Management

Transport planning derives from the picking process in accordance with the stock available to despatch.

If collections are already recorded in the system, the despatch advices automatically associate themselves to a suitable collection. One transport advice can be associated with many despatch advances.

The transport advice can be printed to give to the driver collecting the goods.

The final stage in the process is the verification of the actual invoice from the carrier.

Invoice Management

Invoicing is completely automatic. Despatch advices can be consolidated into one invoice or can be invoiced separately.

It is possible to enter invoices manually if necessary (e.g. one-off invoices for tooling, transport etc)

It is also possible to block invoices (if for example there is no valid current pricing record)

In the case of retrospective price changes, the system can analyse the invoices produced at the (now) wrong price and generate the appropriate retroactive invoice or credit.

Integration

Links with Production Management Systems

GALION Automotive allows the integration with various external ERP systems. Standard processes allow the automation of the integration procedures.

Parameterisation of ERP links is at the level of

- Article (controlling jointly maintained data)
- ERP environment (providing integration with different production management systems)
- Stock movements (defining the rules by transaction)

Bi-directional stock movement integration

Automation of integration processing

Links with Accounting systems

Generation of an accounting interface for customer invoices