POSITION OF LOGISTIC SERVICE PROVIDER IN VEHICLE LOGISTICS

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Introduction

Not only in vehicle logistic but nowadays also in other sectors e.g. electronic industry, supplier-customer relations subsequently developed. The aim is in fact very simple: producers should be subsequently focused only on production and logistic activities should be outsourced from providers of logistic activities. This article deals with status of a logistic service provider. It shows some types of strategies what have progressively developed in supplier-consumer's relations. Those strategies are Single Sourcing, Modular Sourcing and System Sourcing. In conclusion, the article deals with Sequential reference-which is a method for preparing of components in order of completion [1].

There are following types of strategies in supplier-consumer's relations in vehicle logistics:

Single Sourcing Strategy

Single Sourcing strategy – each supplier delivers components and parts for assembling of passenger cars directly to producer. Individual suppliers are responsible for logistics and quality of supplied components and parts. There exists very good information flow between the producer and the supplier. Close dependence between supplier and customer and possibility of their long-term partnership arises here [2].

Fig. 1: Schematic representation of relations in the Single Sourcing strategy

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Modular Sourcing Strategy

Modular Sourcing strategy – assembled parts and components are taken from several suppliers. Relatively small diversity of these parts leads to smaller warehouse stocks, lower expenditures for producer’s control and to the integration of suppliers to the whole purchase process [2]. Within this strategy the supplier does not sell only parts but also supplementary services, as for example commissional and assembly services. Automotive field tries to achieve the expense profitability by means of establishing the precise outsourcing for high volume of production.

Instead of numerous direct suppliers, there are a few system suppliers that provide consumers with complete units. Producers of passenger cars are taking finished modules from the system suppliers. These parts are supplied from subcontractors. These subcontractors have no direct contact to vehicle producers.

Fig. 2: Schematic representation of relations in the Modular Sourcing strategy

System Sourcing Strategy

System Sourcing strategy – the supplier does not only participate in logistic assignments but also in research and development, purchasing, disposition and input of articles and in ensuring of quality too [2]. System providers and subproviders take part in the integral process of delivery. Therefore we expect that the car factories shift more competences on the planning and capacity on suppliers. In this way the suppliers will be interested in the whole system of the vehicle manufacturing by the form of research, development, preparation of the production and especially by the logistics [2].
In manufacturing of some types of the passenger cars, vehicle logistics uses in supplier-customer relations the Modular Sourcing strategy and recently the System Sourcing strategy with Just-in-Time (JIT) technology of sequential supply. These are based on the concept of material flow for some specific type of vehicle and they result from the size of parts and number of variants. Sequential supplies are managed and controlled in collaboration with the producer of passenger cars by external provider of logistic services on behalf of the subcontractor of components and engine parts. Consequently individual supplying firms are for passenger cars producer represented by this external logistic provider. Only supplying firms are contracting parties for the car producer [2].

Deliveries of sequence parts from individual suppliers using the JIT technology to the car producer follow the logistic concept of given vehicle type. The sequence deliveries are realized in reversible special-purpose palettes directly to the assembly place.

Ownership transition of the sequence parts becomes from supplier to the car producer at the moment of accounting of sequence delivery reference by car producer. Risk transition becomes from supplier to the car producer at the moment of taking of prepared parts from the sequence palette at the assembling tact where an employee of the car producer pursues the visual check of these parts. The supplier must deliver high-quality and unexceptionable parts.
These parts will be checked every time before expedition to the car producer [3]. The external provider of the logistic services maintains also storage of the sequence parts for several suppliers not only from the inland but from foreign countries too. It is customary that some suppliers rent storage space from the external provider of the logistic services. Afterwards themselves take care of the sequence preparation of parts. For other suppliers it is external provider who is responsible for the sequence preparation.

All parts for the sequence deliveries are made in some batches and suppliers sent them by JIT supplies to the stock of finished units near the place of the car production. JIT supplies are periodically carried to the logistic centre of the external provider of logistic services. Domestic suppliers have usually in storage of logistic centre reserve for at least 2-3 days and foreign suppliers for 5-6 days. Supplying of the logistic centre is based on the short-term and long-term perspective of the car producer considering the situation in the logistic stock and the transport (delivery time) from a producer.

All suppliers get regularly long-term and short-term references from car producers with the numbers of demanded parts. These references are subsequently processed and underlie the disposition of the input material and the planning of the production. Supplier working in JIT system is responsible for both processes. The car producer has occasion through the mediation of disposition twice a day to make a system check of the external logistic provider’s stock. The suppliers obtain the information about the stock situation once a day from the external provider of logistic services (logistic centre) by electronic way, in the emergency by a phone or fax [1].

Information flow interconnects car producers and JIT suppliers on behalf of external provider of logistic services. JIT suppliers obtain long-term and short-term references and daily summary bill of delivery from car producer. External provider of logistic services obtains reference data and sequential references from car producer. In need he can forward reference data to JIT supplier. Long-term reference contains all defined parts in demanded quantity per week with six months perspective. Short-term reference contains all defined parts in demanded quantity for seven work days. Sequential reference comes out from certain control point as stimulus for production and deliveries and contains identification number of vehicle and appropriate defined parts. Car producer makes daily summary bill and sends it daily by means of electronic data transmission as basis for creating of invoice by supplier. Content of this report comprises all referenced parts with their referenced quantities. It is
necessary to archive these reference data until getting of sequential reference. In case of failure of electronic data transmission these sequential references are sent by fax or through logistic dispatching coordinator mediation. Material flow realisation runs after getting of sequential reference when logistic centre personnel delivers from warehouse demanded parts from transport pallets, indicates them and prepares them according to sequence in special pallets for JIT sequence.

Conclusion

Sequential reference is method how to prepare parts in order of assembly. It is type of reference what meets all presumptions and demands of the JIT system. It is used by components with high number of variants. These components can’t be prepared for assembly in demanded sequence in case of needed space.

In half of 90’s car industry factories in west Europe noted passenger cars demand decrease regarding price competition on world market. The solution from their side was requirement for suppliers to decrease price volume of supplied parts and components. Considering really low costs of Asian and east European suppliers, this requirement for input price reducing was up to 25 %. Producers worked on assumptions that suppliers develops in their own expense e.g. axles, driving parts, driving electronics etc. as so called compact systems and these compact units will be supplied, or also that they assembles whole construction bodies before gates of car industry assembly enterprises. Following reductions of production depth in car industry arised by entering of suppliers or external providers of logistic services directly to production belt. They bear full responsibility for making operations and work quality.

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Literature:


