

## SECTION II — TRANSPORTATION OPTIONS

When sourcing materials to manufacture your products, you can either purchase them directly from primary suppliers, or obtain them through a middleman or broker, or make them yourself. Purchasing transportation services is much the same in that you can either make arrangements directly with the carriers in each mode (air, motor carrier, rail, intermodal and marine), or you can make use of the bargaining power of intermediaries (freight forwarders, transportation brokers, shippers' agents, and shippers' associations), or you can transport the goods yourself in your own private fleet of trucks.

The purpose of this section is to point out the relative advantages and disadvantages of alternative transportation arrangements in terms of their individual characteristics. The current status of the modes and sensible practices to keep in mind when using any of them are also highlighted.

### A. DEALING DIRECTLY WITH CARRIERS

#### Air Freight

Air freight is the fastest mode. Air rates are usually also the highest. Therefore, air is best used to move goods which are high in value and are able to bear the higher cost of moving them by air such as jewellery, live animals, computer parts, pharmaceutical products, spare parts and other valuable items. One airline executive suggests that products worth \$2 per pound or more are suitable for air transport.<sup>1</sup> Other products suitable for air transport are goods which are perishable or fragile, or which are required in an emergency.

Some shippers use air freight as a method of eliminating regional warehouse space requirements thereby reducing one aspect of overall distribution costs. The speed and reliability of air freight can justify shipping directly to branches or clients eliminating not only the need for regional storage space, but also reducing point-of-origin inventory, cutting in-transit time and improving the flow of goods by allowing smaller but more frequent shipments.

Most air carriers claim that their service from Central Canadian origins to Southern U.S. destinations takes approximately nine hours from terminal to terminal with a minimum lead time of two hours at each end for pickup and delivery, resulting in an average transit time of approximately 13 hours. The level of service could range from 10 to 20 hours, depending on the city pairs. However, certain carriers make extensive use of trucks for portions of the haul which can add to

shipment time significantly. To avoid delays and costs for air shipments you should use the airline which has direct service between the city to which you wish to ship and the city closest to you (e.g. air shipments from Windsor and Quebec City are most effectively shipped using air carriers operating out of Detroit and Montreal respectively).

Each carrier sets its own liability limits within minimum conditions governed by the Warsaw Convention. However, loss and theft rates for high value goods are lower in the air mode so reasonable insurance premiums are available. Shippers should refer to their transport insurance broker to determine whether private insurance arrangements are preferable to the use of carrier-sponsored rates for shipment values in excess of declared values.

Shippers should review the cost of expedited air service rates against inventory savings and associated capital cost savings that can be achieved by using this mode. You must also evaluate available schedules and select the air carrier best fitting your service requirements.

In shipping by air, it will be necessary to define the average shipment configurations (weight, length x height x width) in order to provide the air carrier with necessary data for rate computation. Rates are calculated on minimum densities so that very lightweight commodities with a high cube to weight relationship will be charged on the basis of a minimum density (pounds per cubic unit of measure).

Goods classification for ratemaking purposes in air cargo is much less complex than in the rail and motor carrier modes. It is estimated that approximately 80 per cent of all air cargo moves under general (i.e. FAK — Freight All Kinds) freight rates, although extremely valuable goods may be assessed at higher rates. Air carriers often offer discounts to encourage movements during certain daytime periods. They also offer directional discounts in order to encourage the loading of their aircraft on predominantly empty flights. Still other discounts are offered for loading goods in air freight containers, of which there are an infinite variety.

Air freight is becoming increasingly valuable as a marketing tool for the shipper, allowing him to deliver goods to the customer in a very rapid time frame. The value of this customer goodwill feature is hard to measure, yet it may sometimes mean the difference between selling goods in a market or not. Shippers must not only examine the relative cost of air versus other modes, but also examine the value of such expedited service from a physical distribution point of view. Slower modes require relatively larger inventories (and more time) to transport goods than do most expedited modes. The increased cost of expedited service, must be weighed against the

<sup>1</sup> Frank Kirkman, Cargo Manager of Nordair in Montreal as quoted in *Canadian Transportation and Distribution Management* — February, 1984 — "Eight Rules for Buying Air Cargo Service".