



## What's the Tipping Point for Changing Modes?

Last issue, we discussed the six pack. This issue, we'll take a look at your legs — your shipment legs, that is. From a shipper's perspective, when you contract with one carrier to pick up and deliver your parcel, that's one leg (even if the carrier may move it to different modes along the way). However, there can be cost savings by managing your own modes, or legs, and consolidating the front end of the transportation.

Too often in domestic shipments, parcels are only consolidated if they are going to the same consignee via the same service. In fact, that is part of the rules for most major carriers that provide parcel weight break discounts for consolidation. That simple mode shift discount is important, but it is not the only way to consolidate your parcels to reduce transportation expense.

For example, let's consider shipments going across the United States. In order to keep the example real, let's give the box some dimensions and a weight: 20" X 20" x 10" and 24 pounds. And, furthermore, we have 160 that need to go from Boston to separate consignees in Southern California. Because they are separate consignees, we cannot enjoy the carrier's consolidated weight discounts. The cost of sending these with a major carrier's list rates would be approximately \$3,467.00

But what if we put these 160 parcels on pallets and hired someone to bring one large (approximately 4,000-pound tare weight shipment) to a carrier's hub and let the carrier do the final delivery to the consignee. Would we save any money?

The answer is... it depends. What we have just created is a multiple leg shipment, and we need to investigate the legs. The first leg with 4,000 pounds is the freight leg and, depending on what method we ship it, can have varying costs.

A Less than Truck Load (LTL) shipment would cost approximately \$1,943.00. This is much less than shipping them all with the parcel carrier. However, this does not get the parcels to the consignee, and we need to add a zone 2 parcel leg, which would then add another \$1,374.00. The total: \$3,317, slightly less than the original \$3,467 that it would have cost to ship them all parcel.

Some readers would now question the time in transit and see if there would be any delays with the multiple modes. Interestingly, the multi-leg example above would result in

meeting or beating most major parcel carriers ground commitments for a cross country delivery.

There's another piece to this puzzle, however. When we investigate the cost of the freight leg, we need to look at the class of goods. While this is not used in calculating the parcel leg, it has a substantial impact on the cost of the LTL leg. The National Motor Freight Transportation Association (NMFTA) provides 18 freight classifications. While carriers are not required to fix their rates according to these classes, most LTL carriers do.

The classes are based on a number of factors, including the density of the material, the ease of handling, the value of the goods, etc. The classes range from a low of 50 to a high of 500. The lower the class number, the less expensive it will be to move the goods.

In the example where we moved 160 parcels and were just at the point where it would be cost effective to look at a multi-leg shipment, the freight rates were based on a class of 92.5. At any class above that (using the list rates that were available on the Internet) the freight leg expense was cost-prohibitive to employ a multi-leg shipment.

As we increase the number of parcels going to the west coast, our cost savings increase. Also, if we can lower the class of goods, our cost savings will increase. This is represented in the chart on the next page. When multi-leg shipping is more expensive than straight parcel, the multi-leg cost is shown in orange. When straight parcel is more expensive, that cost is shown in orange. The point at which the straight parcel flips to orange is the tipping point, or inflection point in which we can start to save money with a multi-leg shipment.

The chart shows different amounts of weight for one class, and the same weights yet again for two different classes. It's important to note that shippers can negotiate class. A lower cost item, for example, may not need the insurance levels associated with its class of goods. This can be especially true if you're processing returns back to a facility and the items may be damaged, as just one example.

Here are some numbers (based on list rates around the end of 2010).

## Multi-Leg Analysis, LTL/ ZONE 8 500lb Pallet(s)

Origin: Boston

Destination: Southern California

Two Shipping Methods: Straight Parcel (SP)

or Multi-Leg to Southern Ca Pool/Hub

Commodity detail Box of Stuff, 20X20X10, at 24 lbs per Case  
20 cases per pallet = 480lbs plus 20lbs (pallet weight) = 500lbs

Pallet size: 48 X 40 X 50

Class 125	Weight	Straight Parcel	Multi Leg	Freight Leg	Parcel Leg	# of Pallets	# of Parcels
	500lbs	\$433.00	\$744.00	\$572.00	\$172.00	1	20
	1000lbs	\$866.00	\$1,290.00	\$947.00	\$343.00	2	40
	2000lbs	\$1,733.00	\$2,320.00	\$1,633.00	\$687.00	4	80
	4000lbs	\$3,467.00	\$4,035.00	\$2,661.00	\$1,374.00	8	160
	6000lbs	\$5,200.00	\$5,319.00	\$3,258.00	\$2,061.00	12	240

Class 92.5	Weight	Straight Parcel	Multi Leg	Freight Leg	Parcel Leg	# of Pallets	# of Parcels
	500lbs	\$433.00	\$585.00	\$413.00	\$172.00	1	20
	1000lbs	\$866.00	\$1,027.00	\$684.00	\$343.00	2	40
	2000lbs	\$1,733.00	\$1,865.00	\$1,178.00	\$687.00	4	80
	4000lbs	\$3,467.00	\$3,317.00	\$1,943.00	\$1,374.00	8	160
	6000lbs	\$5,200.00	\$4,435.00	\$2,374.00	\$2,061.00	12	240

Class 77.5	Weight	Straight Parcel	Multi Leg	Freight Leg	Parcel Leg	# of Pallets	# of Parcels
	500lbs	\$433.00	\$508.00	\$336.00	\$172.00	1	20
	1000lbs	\$866.00	\$900.00	\$557.00	\$343.00	2	40
	2000lbs	\$1,733.00	\$1,646.00	\$959.00	\$687.00	4	80
	4000lbs	\$3,467.00	\$3,117.00	\$1,743.00	\$1,374.00	8	160
	6000lbs	\$5,200.00	\$4,192.00	\$2,131.00	\$2,061.00	12	240

You might observe and ask why I stopped at 12 pallets. That's because we hit another point of analyzing your freight leg around that quantity. The most common trailers doing long distance hauls across the country are 48' and 53' trailers. However, many LTL carriers will not accept your load unless it will also fit in a 28' pup trailer. A pup trailer can hold around 16 Pallets. These pup trailers are often used in tandem and are very convenient for switching from one rig to another at pooling points.

As you increase beyond 12 pallets and approach the limit of 16, you should investigate a Truck Load (TL) quote. The cost for a full (48' or 53') truck load is approximately \$3,000 plus fuel.

Remember, many multi-carrier shipping systems can provide both parcel and freight quotes. With a system that allows you access to both, you can conveniently take a good look at your legs. ■

**PETER STARVASKI** has over 10 years in the parcel shipping industry and is a recognized industry expert in parcel shipping, having authored numerous articles and whitepapers. He is currently Director, Product Management for Kewill's Shipping Products.



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