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Reefer on the Brink

Ashish Gupta, Convenor, Refcold 2025 and Director, Standard Refrigeration, New DelhiDespite being the backbone of cold chains, India’s refrigerated transport sector grapples with systemic inefficiencies that threaten the integrity of perishable cargo logi

By **Mansi Jamsudkar** | July 1, 2025



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Despite being the backbone of cold chains, India's refrigerated transport sector grapples with systemic inefficiencies that threaten the integrity of perishable cargo logistics.

The efficiency and reliability of reefer (refrigerated) transport systems are critical to the integrity of cold chains, especially when the product involves perishable goods like food, pharmaceuticals, and biotech items. However, several systemic challenges continue to hinder optimal operations and delivery performance. A focused view on the major pain points is outlined below.

Delays in Transit

Reefer vehicles must crisscross an entire geography, often confronting poor infrastructure and road conditions. Add to that traffic congestion, regulatory checkpoints, and inefficiencies at loading and unloading points—each state follows different rules and exhibits varying levels of sensitivity towards cold chain goods.

A lack of awareness in handling perishable cargo adds another layer of complexity. While roadside assistance is being augmented, there is still too much exposure to breakdown risks and the unavailability of critical parts or trained manpower.

Each delay increases the risk of temperature deviations, leading to potential spoilage and significant economic losses.

Breakdowns and Maintenance Gaps

Reefer units are not inherently complex, but they do require regular maintenance and skilled operation. Unfortunately, critical spare parts are not available uniformly across all regions. Many operators continue to use outdated or poorly maintained fleets, and emergency service support is limited, especially along remote routes.

Breakdowns not only delay delivery but also disrupt cold chain continuity, leading to compromised product quality.

Non-Availability of Real-Time Tracking and Data

Reliable tracking is the cornerstone of modern logistics. While GPS-based systems are in place, field experience shows that truck drivers often find ways to circumvent these tools. Moreover, data—if collected—is rarely shared due to concerns around backlash or social media exposure. This lack of real-time monitoring of temperature excursions or delays during transit severely hampers stakeholder confidence in the system.

Human Resource Challenges

Human capital remains one of the biggest roadblocks. Vehicles can break down at any time and place, yet trained personnel are scarce in regional centres and nearly absent in remote areas.
Loaders and handlers frequently lack awareness of cold chain sensitivity. High attrition, poor working conditions, and irregular work availability further reduce workforce reliability. This gap often results in avoidable errors such as improper loading, manual override of temperature settings, and general mishandling of cargo.

Inability to Handle Multi-Temperature Zones in a Single Container

Modern retail and pharmaceutical sectors increasingly demand mixed loads requiring different temperature settings within a single reefer. Yet most reefer units currently in service are single-chamber and cannot meet these requirements.
While partitioned, multi-temperature vehicles do exist, they are expensive and not widely adopted. Moreover, under the payload-based revenue model, efficiency and excellence are often the first casualties.

Decisive Steps

With rising demands and changing lifestyles, expectations from the reefer transport sector will continue to grow multifold. To strengthen its reliability and value proposition, India’s reefer transport system must overcome these interlinked challenges. Investments in fleet modernisation, digital tracking systems, skill development, and flexible container technologies are vital. Without decisive action, the sector will continue to suffer economic, environmental, and reputational losses, undermining the full potential of cold chain logistics in India.

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