

The Safe Transport of Food

- Prime operates a refrigerated division (“reefer”) for the temperature controlled transit of temperature sensitive cargo, including food products. Prime additionally operates a bulk liquid tanker (“BLT”) division for the transit of various food grade materials. The sanitary transport of refrigerated food and/or bulk liquid is a collaborative effort between the shipper, loader, carrier and receiver
- The burden of safety is shared between all parties involved, and is often supported by legal contracts
- It is important for all parties and persons involved in the integrated refrigerated and BLT transport supply chain to be aware of regulatory requirements as well as industry best practices to ensure safe transit of cargo
- The Food Safety Modernization Act (FSMA) enables the FDA to focus more on preventing food safety problems
- The Sanitary Transportation of Food (STF) rule allows the transportation industry to continue to use best practices concerning cleaning, inspection, maintenance, loading and unloading, and operation of vehicles to prevent adulteration linked to food safety and to enhance ongoing food safety throughout our industry
- It is critical for drivers to possess an awareness of potential food safety problems that may occur during transportation
- Records of personnel training will be kept for no fewer than twelve months

What the Federal Regs Require (21 C.F.R. 1.900 et. seq).

(§1.906) Vehicles and Transportation Equipment

* The design and maintenance of vehicles and transportation equipment must be such to ensure that it do not cause the food that they transport to become unsafe.

* *1.906a* Vehicles and transportation equipment must be designed and of such material and workmanship to be suitable and adequately cleanable for their intended use to prevent food from becoming encountering spoliation

* *1.906b* Vehicles and transportation equipment must be maintained in such sanitary condition for their intended use to prevent food from becoming unsafe.

* *1.906c* Vehicles and transportation equipment used for food requiring temperature control for safety must be designed, maintained and equipped, with adequate temperature control to prevent the food from becoming unsafe.

* *1.906d* Vehicles and transportation equipment must be stored in a manner that prevents harborage of pests or becoming contaminated in any other manner that could result in food becoming unsafe.

(§1.908) Transportation Operations

The measures taken during transportation to ensure food safety, such as adequate temperature controls, preventing contamination of ready to eat food from touching raw food, protection of food from

contamination by non-food items in the same load or previous load, and protection of food from cross-contact:

1.908a General Requirements: Applies to all shippers, carriers, loaders, and receivers. A person may be subject to these requirements in multiple capacities.

- * 1.908a General Requirements (Cont) Competent supervisory personnel must be assigned the task of ensuring compliance with STF requirements.
- * Transportation operations must be conducted so as to prevent food from becoming unsafe, including taking measures such as segregation, isolation, and packaging to separate foods
- * Relevant factors (*e.g.*, animal food vs. human food, raw material vs. finished food) must be specified in determining the necessary conditions and controls for the transportation operation.
- *. If there is any indication of a possible material failure of temperature control or other conditions that may render the food unsafe the food shall not be sold or otherwise distributed until it is determined by a qualified person that it is safe to do so

1.908e Requirements Applicable to Carriers

- * The carrier must ensure that vehicles and equipment meet the shipper's specifications
- * Upon completion of the transport and if requested by the receiver, the carrier must provide the operating temperature specified by the shipper
- * Carriers must pre-cool each mechanically refrigerated cold storage compartment as specified by the shipper
- * If requested by a shipper, a carrier that offers a bulk vehicle must identify the previous cargo.
- * If requested by a shipper, a carrier that offers a bulk vehicle must provide recent cleaning information
- * Prime has specified practices for cleaning, sanitizing if necessary, and inspecting vehicles and transportation equipment to maintain them in appropriate sanitary condition, and describing how it will comply with both the temperature control requirement and the provisions for use of bulk vehicles. For any washout procedure performed by an outside vendor, Prime retains all washout receipts as required by the Kosher Certifications set forth by the Rabbi and in accordance with applicable food safety laws, regulations, and guidelines.

(§1.910) Training Requirements for Carriers Engaged in Transportation Operations

Training is required when the carrier and shipper agree that the carrier is responsible for sanitary conditions during transport including recordkeeping.

(§1.910) Record Requirements for Shippers, Receivers, Loaders and Carriers

Records must be maintained of written procedures, agreements and training (required of carriers). The required retention time for these records depends upon the type of record and when the covered activity occurred, but does not exceed 12 months.

The Supply Chain Relationship

- The relationship between shippers, carriers, loaders and receivers is key to maintaining an uninterrupted cold chain that allows for the safe transit of food cargo

- The end goal is to ensure a seamless cold chain that includes a positive working partnerships that benefit all parties. **In the end, carriers, loaders and receivers should verify that they have the final detailed instructions and requirements from the shippers in writing to ensure compliance**

Vehicle and Equipment Storage

Vehicles and transportation equipment must be stored in a manner that prevents harborage of pests or becoming contaminated in any other manner that could result in food becoming unsafe for human or animal consumption.

Food Safety Procedures (FSP)

Transportation operations must be coordinated such that food is transported in a sanitary manner. Clearly defined and written transportation procedures, specifically related to maintaining food safety, must be developed and shared with all parties involved in the transport of perishable foods.

Temperature Requirements

The type of goods being transported will determine the temperature requirements. Specified numeric temperature or a range of temperatures in Fahrenheit to be maintained during transport with identified tolerances

Time & Temperature Deviations and Corrective Actions

Shipper specified transport temperatures; including set-point temperature as well as upper control limit (UCL) and lower control limit (LCL) are used to establish the desired temperature

Cleaning and Sanitation

- Cleanliness prevents bacterial, chemical, and odor contamination of food product loads. Remove all loose debris and wash or sweep the floors clean. The floor drains and grooves should be free of debris so drainage will not be blocked.
- Cleaning and sanitation of bulk food containers (trailers) is a critical step in food safety procedures, and should include proper cleaning and sanitation methods as well as information about the most recent cleaning of the trailer.
- Equipment transporting human or animal food items require a higher level of inspection and maintenance. Equipment needs to be clean and otherwise suitable for the transport of food items or goods associated with the manufacture of food items.

Pre-Loading Protocol (Refrigerated)

- Users should set the unit controller to the desired set-point temperature and other parameters

- Select the appropriate operating mode for the cargo being transported and/or per shipper requirements. Choose either the ‘Continuous Run’ or the “START-STOP” mode appropriate for the cargo being transported.
- Pre-cooling trailers is a crucial part of the refrigerated distribution process and represents a industry Best Practice for carriers.
- Before loading product, pre-cool the trailer or container to the desired carrying temperature unless otherwise specified by the shipper and carrier. Turn the refrigeration unit ‘OFF’ when product is ready to be loaded and BEFORE box doors are opened.
- Pre-cooling trailers may take up to two hours or possibly more to maintain stable temperatures.
- Proper loading will help ensure cargo quality/condition is maintained throughout its journey and mitigate risks for Carriers. Carriers should always cross-check procedures with the shipper/PCQI Food Safety Plan (FSP) to ensure requirements are met and actions are taken to ensure compliancy.
- Turning off the refrigeration unit when the doors are open prevents:
 - a. Moisture from accumulating on the evaporator coil
 - b. Ice accumulation on the coil
 - c. Poor refrigeration performance
 - d. Blockage of conditioned air movement to the cargo
- Load the product quickly and efficiently and use loading patterns that maximize air circulation ‘around’ and ‘through’ the entire load for frozen cargo and chill cargoes, respectively. Frozen product should always be palletized and centerline-loaded in order to maintain a cold air envelope around all six sides of the load. Pallet placement must allow refrigerated air to pass between the load, the walls, and the floor.
- The pallet placement in a trailer must allow conditioned air to pass between the load, walls and the floor. Air flows between the walls and the load only if the pallets or cargo are not touching the walls. Cargo height should not extend high enough to touch the air chute

Pre-Loading Protocol (BLT)

- Prime drivers must arrive with a clean tank, as evidenced by a tank wash ticket/prior cleaning activity
- Prime drivers must ensure that tank seals are fully intact
- Because the tank is sealed at the time Prime drivers pick up the equipment, it is the responsibility of the shipper to inspect the tank for cleanliness prior to loading. The Prime driver should immediately communicate to his or her fleet manager any concern expressed on-site by shipping personnel regarding the trailer’s suitability and/or cleanliness for food grade shipping
- Before departing the shipping facility, Prime drivers must confirm that the affixed seals match the seal identification contents contained on the bill of lading

- Prime drivers must determine the product temperature and confirm that it matches the temperature identified on the bill of lading

Trailer Loading Best Practices Impacting Temperature Control

- Verify the product being loaded is within the appropriate temperature limits for the product type.
- Temperature verification can usually be accomplished by placing a calibrated thermometer
- If the order does not completely fill the trailer, a “Load Bar” should be used to stabilize the load.
- Any product damaged during trailer loading should be immediately addressed according to the customer’s previously stated expectations.
- Care should be taken to ensure that the top cases in the trailer do not inhibit airflow
- Loading the trailer should proceed in an expeditious manner to prevent product temperature abuse.
- Place a unique security seal on the truck door and record the seal number on the shipping paperwork.
- Appropriate records should be maintained for all activities for traceability/recall purposes
- Stacking cargo directly on the floor or against the sidewalls can cause product warming or chilling.

Check-Out Practices from the Shipper that Impact Temperature Control

- The check-out personnel should validate that the paperwork is accurately and completely filled out.
- The driver will be handed all appropriate paperwork as well as a gate pass if necessary.
- The driver should sign any appropriate paperwork, including driver logs, bill(s) of lading, etc. and provided copies.
- The site will retain similar copies following corporate or local retention policies.
- The driver is now clear for departure.
- The local site should update its logs and paperwork, noting the time that unloading of the trailer was completed as well as the time the driver was cleared for departure.

En Route Compliance Requirements

- Monitoring the trailer while in transit provides the operator with valuable information about the quality and performance of the trailer and the driver
- It is imperative that the compartmental air temperatures are being monitored on a real-time basis. If the air temperature is properly maintained, the product temperature cannot go out of threshold specification
- Data collection of real-time transit information requires the use of a Telematics device.
- Within Prime’s tanker division, drivers should consistently monitor the temperature gauge to ensure that the proper product temperature range is maintained, and that no heat loss occurs within the tank, throughout the course of transit.

Post-Trip Inspection – End of Route

- At the conclusion of the trip/route, drivers should conduct a post-trip inspection to verify the conditions of their vehicles

Overview of Prime’s Food Transit Operational Model

Prime continually monitors all procedures and transit practices associated with the safe, efficient, and effective transport of perishable food cargo in adherence to all provisions of the Food Safety Modernization Act.

- Live Dispatch Protocol - Prime drivers work in collaboration with Fleet Managers to receive temperature sensitive food load assignments. Prime requires all fleet managers to conduct a “Live Dispatch” call with Prime drivers before the drivers enter the food shipping facility for load pickup. The driver must offer temperature requirements detailed on the bill of lading. In-house operations personnel then confirm that all temperature particulars are properly inputted into Prime’s computer system. Prime Fleet Managers also confirm that trailer washouts have been performed (if required), along with related “Live Dispatch” food safety protocol undertaken to ensure that food integrity goes uncompromised during freight transit.
- Coordination between Prime personnel to ensure that drivers are safely and effectively transiting food product loads is involved and continuously active: Fleet managers, sales coordinators, sales assistants, and Road Assist technicians all interface and are available to intervene in the event of a safety, security, or equipment integrity concern twenty-four hours a day on each day of the year.

Temperature Excursion (Refrigerated)

- All Prime trailer equipment is equipped with trailer tracking technology. Such technology allows for Prime personnel to keep continuous electronic watch over the equipment’s exact whereabouts and temperature integrity monitoring. All Prime trailer equipment is outfitted with Carrier refrigeration units. Prime has on site at its headquarters a full-time Carrier representative/technician who is able to offer guidance and/or intervene in the event of a temperature excursion extent that requires immediate attention. Any other temperature related issue involving the functional integrity of Prime asset equipment can, therefore, be addressed by natively housed personnel.
- Reefer Operations personnel receive real-time temperature alerts in the event that temperature deviation from the specified set-point occurs. All such Prime personnel are staffed and situated to make immediate contact with driver in the event of temperature incursion at any hour of the day. Additionally, Road Assist maintenance members are staffed at Prime 24/7 to intervene and locate outside shop assistance in the event that a structural integrity issue with the trailer requires immediate corrective action. Alerts enabling corrective action are most commonly associated with set point temperature deviation of more than one degree, the wrong run mode programmed in the reefer, or temperature that falls out of proper range.

Temperature Excursion (BLT)

- Prime BLT equipment is outfitted with Orbcomm tracking devices. Orbcomm technology allows for Prime personnel to keep electronic watch over the BLT equipment, while also allowing for remote monitoring of the tank's temperature integrity. Such technology is employed to ensure against heat loss in the tank during transit.
- Prime Sales personnel and Fleet Managers receive real time temperature alerts in the event the temperature deviates outside the set temperature parameters. Prime's Tanker Personnel receive updates in two hour intervals. Such temperature verification data is reviewed by Prime personnel to detect whether heat loss is transit is occurring.
- **Corrective Action**
- Prime is dedicated to a continuous improvement process to best adhere to food transit best practices. With the advancement in technology, Prime does, from time to time, identify certain food safety best practices procedure refinement that is made available by the technological upgrade. In the event of on-the-road events that cause food cargo to become compromised or damaged, Prime also investigates the reasons for any such load disruption and changes operating procedure to preclude event recurrence. Prime provides documentation of corrective measures that it makes available to its shipping customer base within fourteen days of undertaking any such corrections.

Reefer Operations Personnel

- You acknowledge that you have read, understand, and agree to comply with all applicable content documented above
- You acknowledge your awareness, understanding, and agreement to adhere to Prime's temperature control protocols and/or methods for the safe transportation of temperature sensitive food
- You agree, as required, to undertake temperature verification of load set points with contemporaneous reefer temperature readouts and will take corrective action as required to ensure that temperature excursion events are mitigated and reported timely to the shipper
- You acknowledge your awareness, understanding, and agreement to adhere to Prime's policy on ensuring clean trailer equipment suitable for the transport of all food products and acknowledge that certain preceding transited loads may contain product that leave residue unfit for food transit and will ensure the trailer equipment presented to the shipping facility has been provided a full trailer washout
- You agree, as required, to participate in and undertake verification that drivers have performed a trailer washout prior to arriving at the shipping site in the event that they visually, or by the

detection of odor, are made aware that the trailer is not sanitarily fit for the safe transit of food cargo.

Trailer Rebuild/Reefer Technicians/Road Assist

- You acknowledge your awareness, understanding, and agreement to adhere to Prime's policy on best practices for ensuring physical equipment integrity.
- You understand that a temperature excursion event can lead to food spoilation that poses potential risk to the shipper and the consuming public
- You agree to ensure that all equipment is maintained, checked, and repaired in such a manner as to ensure temperature integrity preservation at the set point defined by the shipper. You agree to act with reasonable dispatch in undertaking any reparative and/or restorative measures required to ensure the physical integrity of Prime's trailer equipment ability to ensure proper temperature control capability for all trailer and reefer equipment
- You understand and agree to report to, and continuously interface with, appropriate operations personnel in mitigating any temperature excursion event to prevent food spoilation.