

UP – Explanation of Methodology - EP 724 (Sub 4)

Metric Item 1 - System-Average Train Speed for the Reporting Week (MPH)

AAR train speed measure. Calculated by dividing train-miles by total hours from origin to destination, less intermediate terminal time. Excludes the following train categories: yard, local, passenger, foreign, and maintenance of way. **Effective December 2, 2019, the definition of arrival and departure, which is used to calculate train speed and car dwell, was modified to more clearly define span of control between line of road and terminal operations. This change is reflected in the individual reporting files and consolidated file starting reporting week of December 11, 2019.**

Metric Item 2 - Weekly Average Terminal Dwell Time Measured in Hours for 10 Largest Terminals In Terms Of Railcar Capacity

AAR terminal dwell measure. Average hours a car resides at the specified terminal location. Begins with train arrival, customer release, or interchange receipt. Ends with train departure, customer placement (actual or constructive), interchange offering or delivery. Excludes cars that move through a terminal on run-through trains. Also excludes stored cars, bad ordered cars, and maintenance of way cars. **Effective December 2, 2019, the definition of arrival and departure, which is used to calculate train speed and car dwell, was modified to more clearly define span of control between line of road and terminal operations. This change is reflected in the individual reporting files and consolidated file starting reporting week of December 11, 2019.**

Metric Item 3 - Total Cars On Line by Car Type for the Reporting Week

AAR cars on line measure. Calculated by AAR using Railinc data. Average daily inventory of all freight cars in revenue fleet regardless of location or status. Includes cars located on shortline railroads, cars delivered to customer facilities and stored cars. Excludes maintenance of way cars. Articulated cars are counted as a single unit.

Metric Item 4 - Weekly Average Dwell Time at Origin for Unit Train Shipments Measured in Hours

Measured at origin, from customer release to train departure. Release time is based on the last cut of five or more cars. Includes trains transporting both loaded and empty freight cars. Excludes trains received in interchange from another railroad and intermodal trains.

Metric Item 5 - Weekly Average Number of Trains Held Short of Destination or Scheduled Interchange by Train Type and Cause

Weekly average based on daily snapshots of active trains. Excludes yard and local trains.

Metric Item 6 - Weekly Average Number of Loaded and Empty Cars in Revenue Service That Have Not Moved In:

Weekly average based on daily snapshots of freight cars in revenue service that have not moved for 48 hours. Begins with pull from customer facility or interchange receipt and ends with car placement at customer facility or interchange delivery. Excludes cars in hold status (constructively placed, stored, bad order, offered in interchange, etc.). Excludes empty cars not billed to a specific consignee, non-revenue car movements, and cars billed to Union Pacific Railroad. Excludes cars with no events reported during the past 28 days. Articulated cars are counted as a single unit.

Metric Item 7 - Weekly total grain cars loaded and billed by State

Number of grain cars loaded and billed each week by state and type of train service. A carload is counted when the loaded car is released by UP's customer or received in interchange from another railroad. State is based on UP origin. Shuttle / dedicated train service includes cars moving on grain shuttle trains. Other than shuttle / dedicated train service includes all other cars moving on unit grain trains or manifest service.

Metric Item 8 - Weekly total grain car orders outstanding by State

Per the tariff, Union Pacific accepts grain orders for half-month periods. Outstanding orders include unfilled guaranteed orders from prior half-month periods plus all unfilled guaranteed orders for the current half. Average number of days late for outstanding orders: For any outstanding orders from prior half-month periods, we calculate the number of days past the end of the half that the cars were ordered for. New car orders are requests received during the reporting period for the next half-month period and beyond. Car orders filled are the number of empty cars delivered to customers for loading during the reporting period. For offline customers, orders are filled when cars are delivered or offered in interchange to the connecting carrier. The data in columns a and b is calculated from a snapshot of outstanding car orders taken every Monday. The data in columns c, d, and e is based on a reporting period that spans Sunday through Saturday. This metric excludes cars in UP's shuttle train program because those cars are controlled by the shuttle operator.

Metric Item 9 - Average Daily Coal Unit Train Loadings vs. Plan for the Reporting Week By Coal Production Region

Average daily count of loaded coal trains released by the mines. Other includes Illinois Basin and Southern Wyoming. Planned loadings for Other not reported due to small number of producers.

Metric Item 10 - Plan vs. Performance for Grain Shuttle (Or Dedicated Grain Train) Round Trips, By Region, Updated to reflect the Previous Month

Average trips per shuttle set per month = 720 hours per month / (Average loaded cycle hours + Average empty cycle hours). A loaded cycle is measured from loaded release to empty release. An empty cycle is measured from empty release to loaded release. The average cycle times are calculated for all cycles that closed during that monthly reporting period. Measure includes routine inspection and preventative maintenance.

Metric Item 11 - Cars originated and interchanged

Carloadings are reported based on specifications provided by the AAR. The traffic group definitions are based on STCC. Weekly carloadings are reported on a Sunday-Saturday schedule.