

# Sanity Checks Explained

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OptimizerPlus
Sanity Checks Explained
<p>Below is a list of sections that <i>may</i> appear on the Sanity Checks depending on the specific customer data that is analyzed. The data is examined based on a specific time frame, typically between 10/1 - 4/30 of the previous heating season. Please discuss any obscurities with the project manager. This can be an unusual heating season, or a large volume of dryer or transport gallons that will impact data analysis of the examined time frame.</p>

Sections	Explanation	Action(s)
The following tanks have been excluded from the queries	List of tank RRNs that are in the OptimizerPlus Exclusion list.	Provide SSI with a list of tanks that should not be scheduled by the optimizer.
Tanks with possible unreasonable capacity (< 100 gallons)	It is difficult for the optimizer to efficiently schedule tanks below 100 gallons.	Check the total tank capacity for accuracy and modify and update if incorrect.
Deliveries in excess of tank capacity	History line items showed deliveries that exceeded the tanks capacity.	Research the tank's delivery history to identify if a wrong tank or multiple tanks were delivered to or if the tank has the wrong size total capacity. Modify the tank if the capacity is inaccurate or educate the drivers if they are filling multiple tanks to 1 Energy Track tank.
Deliveries that cannot be filled in one truck run	The tank's total capacity exceeds the volume of the max fill level set on the bobtail.	Identify that the tank's total capacity is correct. Modify the tank if the capacity is inaccurate. If the tank size is accurate, will the optimizer schedule the tank? If so, the optimizer will schedule the delivery into 2 different runs and the tank will drive the route for the day.

Filled capacity larger than its truck filled capacity	The tank's total capacity exceeds the volume of the max fill level set on the bobtail.	Identify if the tank's total capacity is correct. If so, will the optimizer schedule the tank? Discuss this tank with SSI.
Questionable kFactors (not between 1 and 50)	kFactors under 1 and above 50 must be considered for accuracy.	kFactors outside of these parameters need to be examined and reviewed for accuracy. Other delivery types may be considered to better schedule the tank (Julian or Call In).
Questionable kFactors when comparing actual vs projected gallons delivered (magnitudes < 1 are run-out risks)	The <i>projected</i> gallons look at the Tank Size, kFactor, Daily Use (depleting on quantity of days that pass, typically 212 days), and the degree days that accumulate over the examined period (typically 10/1-4/30). The <i>actual</i> gallons are pulled from the history of the tank's delivery during the time period. This section shows the discrepancy between the <i>projected</i> and <i>actual</i> gallons.	This discrepancy showcases data (kFactors and Daily Use) that needs examined. Based on the mathematical formula for determining kFactors, there is a variance that needs addressed. Review the kFactors and Daily Use for accuracy. Other delivery types may be considered to better schedule the tank (Julian or Call In).
Questionable daily use amount	Daily Use in EnergyForce is depleted daily in EnergyForce when the SDD program runs. This rate is set on tanks for non-heating appliances. Based on industry standards, the sanity checks are set to flag a daily use that is greater than 1 gallon per day.	Review the daily use rate. Look for appliances and/or ticklers that explain the high daily use rate. A high daily use rate will over deplete a tank throughout the summer (warm) months and wreak havoc on kFactors that can lead to run outs during the winter (cold) months!

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Questionable KeepFull fractionFulls	At some point during the reviewed period, the estimated gallons to fill exceeded the tank's capacity capped at 80%.	This can indicate an incorrect tank size or a tank filled to an incorrect ending %. Modify the tank if the capacity is inaccurate or educate the drivers if they are filling multiple tanks to 1 Energy Track tank or inputting an incorrect ending %.
Questionable locations > 75 miles	Tank RRN GPS that put the tank more than 75 miles away from the nearest Tank or Yard set on the route.	Review the accuracy of the GPS coordinates to make sure they are correct. If they are, this will identify the outlying tanks for the OptimizerPlus routes.
Tanks with customer_type and delivery_type combinations not found in OptiTank	The Optimizer uses a customer type / delivery type matrix to identify <i>what</i> tanks the Optimizer looks at, along with how the Optimizer looks at them.	Tanks will need examined to make sure the customer type and delivery type are accurate. If they are, the combination will need set up in the matrix.
Summary of combinations to add	Identifies the combinations that are not currently in the matrix so they can be addressed.	Either add the combination or correct the tanks that have the inaccurate customer and/or delivery type set.
Tanks that have no corresponding yard (possibly a bad route)	The tanks are on a route that is not assigned to a yard, or starting location.	Confirm the tank's route. Most likely the tank is on a route that is not an OptimizerPlus route. This may be intended or it may not have recalculated to an OptimizerPlus route because of missing GPS.

Terms	Definitions
Will Call Deliveries	History Line Items show a delivery to a tank identified as a date driven Call In tank.
Julian Deliveries	History Line Items show a delivery to a tank identified as a date driven tank with a Julian schedule.

NewTanks	A tank that does not have a TankDDHist entry at the start of the season, meaning it shows up during the season, not that the start of the season.
KeepFull	History Line Items show a delivery to a tank identified as an auto schedule where the optimizer will look at kFactor, Daily Use, Tank Size, Degree Days, and time intervals between deliveries to deplete the tank.
Non-historical	Tanks that do not have the following applicable History Line Item entries during the analyzed time frame: Transaction Code is 13, 14, 15, or 16, Gallones Delivered > 0 (minus any voided amounts on the same day), Tank RRN is active and not in the Exclusion List with a total capacity 0, Tank RRN has a valid location.