

# OptimizerPlus Maintenance Tables

Last Modified on 11/07/2024 12:08 pm EST

## Yard and Remote Tanks GPS

Div	Description	X1	Y1	Setup Mins	Pumping Glns/Min
1	AVON LP	-864347530	-397612620	10	120.00
1	PLAINFIELD LP	-864126740	-397099270	10	100.00
1	BAINBRIDGE LP	-868122940	-397624855	10	120.00

Div	Route	Yrd/Tank
1	1	Y
1	2	Y
1	3	T

1. Each Yard/Storage or non-filling location (drivers home) needs listed by Division with a description.
2. X1 and Y1 coordinates both need to display a negative sign (-) in front of the coordinate.
3. The coordinate needs to be 9 characters long except where longitude has 3 digits to the left of the decimal; then it requires 10 characters.
4. *Setup Mins* indicate the time required by drivers to hook/unhook the hose from the truck. For a non-filling location (drivers home) this will be 0.
5. *Pumping Glns/Min* are the pumping speeds from the storage tank into the truck. For a non-filling location (drivers home) this will be 0.
6. The table to the right will list the Division and Routes that will utilize the storage facility with a Y (Yard) indicating the start and end of a shift, an N (non-filling) to indicate the start of the first run (usually a drivers home) or a T (Tank) to indicate a filling option during the shift.
7. Each route must have one Yard but can have multiple refilling locations (T).

## Customer/Delivery Type Matrix

Division	Cust Type	Deliv Type	Optigistics Tank Type	SummerFill Tank Type
1	1	1	C	
1	1	2	A	S
1	1	3	J	
1	2	1	C	
1	2	2	A	S
1	2	3	J	
1	3	1	C	
1	3	2	A	S
1	3	3	J	
1	4	1	C	
1	4	2	A	S
1	4	3	J	
1	5	1	C	
1	5	2	A	S
1	5	3	J	
1	6	1	C	
1	6	2	C	
1	11	1	C	S

1. **Load from Tank File** is only run during the implementation of the OptimizerPlus and should NOT be selected. When this program is run, it will populate all combinations of customer and delivery type that exist in the tank table for active tanks. However, the *Optigistics Tank Type* and *SummerFill Tank Type* will not be populated.
2. The *Optigistics Tank Type* will be one of the following:
  - C – Call-In
  - A – Auto Fill
  - J – Julian Schedule
3. The assignment of these tank types will let the OptimizerPlus know which scheduling parameters to follow when building route schedules.
4. To add a new combination, use **Ctrl+M**, arrow down to a new line, and add the new information.
5. *SummerFill Tank Type* is used for Summer Fill scheduling. The letter S will need entered for all auto schedule combinations that would receive a Summer Fill. If using a Customer Type that gets a Summer Fill paired with a Delivery Type of Will Call (Call-In), enter an S for that Call-In entry.

**Note:** All other Will Call and Julian Delivery Types will export for a delivery when an active call-in order is entered, or a Julian Schedule is due.

## Weather Predictions

Yard and Remote Tanks GPS

Truck Maintenance

Driver Maintenance

Customer/Delivery Type Matrix

Weather Predictions

Climate Parameters

Exclude Tanks from Export

Optigistics Parameters

Routes to Schedule

DegreeDay Region Conversion

Division	DD Region	Date	High	Low
1	1	05/27/2022	75	57
1	1	05/28/2022	83	70
1	1	05/29/2022	85	70
1	1	05/30/2022	85	71
1	1	05/31/2022	86	64
1	1	06/01/2022	78	59
1	1	06/02/2022	73	53
1	1	06/03/2022	76	58
1	1	06/04/2022	76	62
1	1	06/05/2022	80	65
1	1	06/06/2022	81	66
1	1	06/07/2022	81	66
1	1	06/08/2022	79	66

1. This table is populated automatically when the Software Degree Day runs during the Automated Task process.
2. Seven days of predictions are required for each active Division/Region. This count is including the current date.

## Climate Parameters

Customer/Delivery Type Matrix

Weather Predictions

Climate Parameters

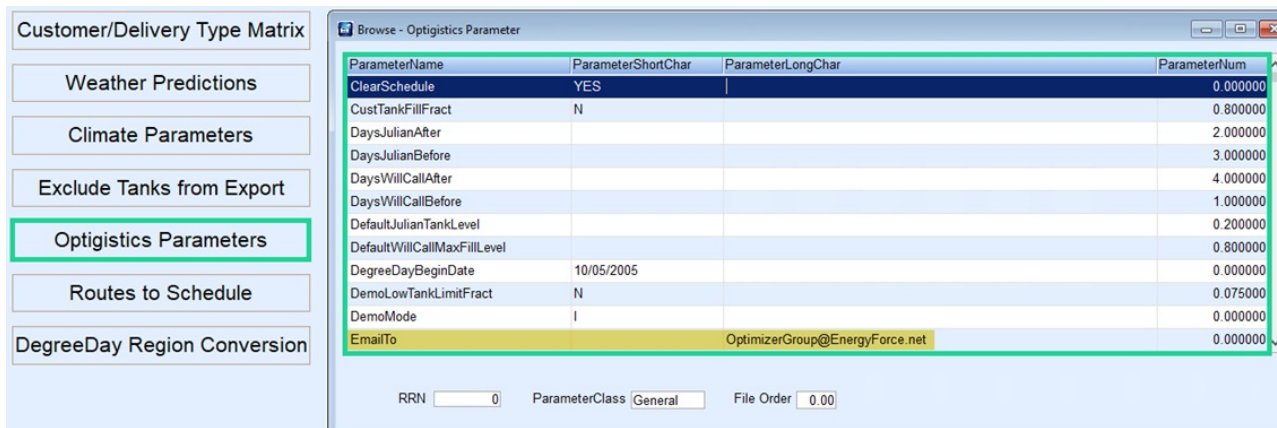
Exclude Tanks from Export

Optigistics Parameters

Division Number	Route	Peak Capacity - Gallons	Max Days per Week Scheduled	Avg Days per Week Scheduled
1	1	9500	6	5
1	2	10000	6	5
1	3	9600	6	5
1	4	8000	6	5
1	5	10000	6	5

1. This information is provided by Optigistics during the OptimizerPlus implementation and will not be modified unless at the time of a rebalance.
2. These values are specified by Division/Route and will indicate the gallon volume that the Optimizer is told can handle during an average day/week.
3. When the value is exceeded, there is a notification on the daily Route Stats email.

# Optigistics Parameters



1. The values in this table should not be touched except for the *EmailTo* line.
2. The *EmailTo* line will list the email address(es) that will be sent the daily Route Stats email. To edit this entry, use **Ctrl+M**, select in the *ParameterLongChar* field in the *EmailTo* line and add or delete email addresses accordingly.

# Routes to Schedule

Division	Route	Div/Truck Assigned	Div/Driver Assigned	Max Truck Refills	Target Threshold	Limit Threshold	Schedule This Route	Start Loc
SOFTWARE SOLUTIONS INTEGRATED	10 EAST AVON	10 / 1122 2012 FREIGHTLIN	1 / 14 BRANDY WILLIAMS	3	0.3000	0.2000	<input checked="" type="checkbox"/>	John Driver - home
1 SOFTWARE SOLUTIONS INTEGRATED	11 SOUTH INDY	20 / 1123 2012 KENWORTH	1 / 19 CURT MALICOAT	3	0.3000	0.2000	<input checked="" type="checkbox"/>	0
1 SOFTWARE SOLUTIONS INTEGRATED	12 WEST DANVILLE	55 / 1211 2021 KENWORTH	1 / 24 SHANNON FLAHERTY	3	0.3000	0.2000	<input checked="" type="checkbox"/>	0

1. All optimized routes must be in this table for the OptimizerPlus to build tank schedules.
2. To make an entry or modification, use **Ctrl+M**.
3. When entering the Truck and Driver, it is recommended to use **F5** and select from the maintenance box.
4. *Max Truck Refills* defines the maximum number of Runs the OptimizerPlus can schedule for that truck. This value must be greater than the Target Refill value for the truck in the *Browse Truck Extensions*.
5. *Target* and *Limit Thresholds* are in decimal form. For a delivery window of 20% - 30%, the *Target Threshold* is .30 and the *Limit Threshold* is .20.
6. *Schedule This Route* is checked for each active route in the table.
7. *Start Loc* is used if the route is starting at a non-filling location such as a driver's home. It is recommended to use **F5** and select from the *Maintenance* box. If the *Start Loc* is not a non-filling location then leave as 0.

# Setting Optimizer to use a Non-Filling Location as Starting Location

Optimizer can be set to start at a non-filling location such as a driver's home on the first run of the day.

1. Navigate to *Supervisor Menu / Maintenance Menu / Optimizer Maintenance / Yard and Remote Tanks GPS*.
2. Select **Create** to add an entry for the non-filling location.  
**Example:** *Description – Driver's home*.
3. **Tab** to enter the coordinates of the driver's home.

- The *Setup Mins* and *Pumping Glns/Min* should be set as 0.
- Tab to enter the *Div* and *Route* this entry is for and set the *Location Type* to *Non-filling*.
- Save** and close the *Yard and Remote Tanks GPS* window.

Div	Description	X1	Y1	Setup Mins	Pumping Glns/Min
220	PAUCEKVIEW	-103727222	-481365402	5	150.00
220	DUDLEYBURY	-103643879	-483429540	5	125.00
225	FLATLEYBURY	-103181584	-486279033	10	125.00
1	DRIVER JOHN	-103185555	-485555555	0	0.00

Div	Route	Location Type
1	6	Non-Filling

- Next, select *Routes to Schedule*.
- Hold **Ctrl + M** to change to *Modify* mode and double click or use **F5** to select the *Non-Filling Start Location Name*. If the Start Location for a route is the yard, the *Start Loc* field should remain set to 0.

Division	Route	Div/Truck Assigned	Div/Driver Assigned	Max Truck Refills	Target Threshold	Limit Threshold	Schedule This Route	Start Loc			
5 WILMSVIEW	1 GISSELFLURT	220 / 58	2014 Kenworth	1 / 5	CHRISTINE BALMBACH	3	0.3000	0.2000	<input checked="" type="checkbox"/>	1	DRIVER JOHN
1 WILMSVIEW	2 PORT THORA	220 / 602	2024 Freight	1 / 3	CALE HILL	3	0.3000	0.2000	<input type="checkbox"/>	0	
1 WILMSVIEW	3 BARRINGERPORT	220 / 603	2024 Kenworth	1 / 5	DUSTY BOGAN	3	0.3000	0.2000	<input type="checkbox"/>	0	
1 WILMSVIEW	6 GREGORYTON	220 / 58	2016 Kenworth	1 / 9	JOHN MERRICK	3	2.0000	1.0000	<input checked="" type="checkbox"/>	1	DRIVER JOHN
1 WILMSVIEW	8 EAST SALVADOR	225 / 53	2012 Freight	1 / 7	STEPHAN WALSH	3	0.3000	0.2000	<input type="checkbox"/>	0	

## Browse Driver Extensions

Division Number	Driver	Driver Type	Pay Rate	Target Hours	Max Hours	Truck	Truck Division	RRN
1	14	hourly	24.0000	8.00	10.00	1122	10	16
1	19	hourly	24.0000	8.00	10.00	1123	20	751
1	24	hourly	24.0000	8.00	10.00	1211	55	14

- There must be an entry for each driver and truck assigned to an active *OptimizerPlus* route listed in the *Routes to Schedule* table.
- The table can be modified using **Ctrl+M**.
- For location-based data setup, the drivers can be entered in Division 1.
- The *Driver Type* is *hourly* with all lower-case characters.
- Pay Rate* is not a value that is in use but an entry must exist. It is recommended to use a standard default value across all drivers.
- Target* and *Max Hours* indicate to the *Optimizer* the desired duration of the schedule while also indicating the maximum limit that it can schedule. The *Optimizer* will not build a schedule surpassing the *Max Hours* limit. The time includes drive time leaving the Yard, setup and pump time at the customer tanks, setup and refill time at the Storage Tanks, and all drive time in between.
- Truck* and *Truck Division* must match what is listed in the *Routes to Schedule* table.
- No action is needed for the *RRN* field.

## Browse Truck Extensions

Truck	Starting Fill Perc	Gallons Per Minute	Max Fill Perc	Number of Drivers	Target Refills	Dollars Per Mile	Truck Tank Size	Division	Truck Tank Type	Average Speed	RRN
1122	0.00	39.00	0.80	1	3	4.50	3200	10	P	45.00	504
1123	0.00	50.00	0.80	1	3	4.50	3200	20	P	45.00	362
1211	0.00	50.00	0.80	1	3	4.50	3200	55	P	45.00	0

1. There must be an entry for each truck assigned to an active OptimizerPlus route listed in the *Routes to Schedule* table.
2. The table can be modified using **Ctrl+M**.
3. *Starting Fill Perc* will be 0.00.
4. *Gallons Per Minute* is the pumping speed of gallons from the truck to customer tanks.
5. *Max Fill Per* is the level the truck is loaded to at each fill in decimal form. For example, if the truck is filled to 80%, the value set on the truck will be .80.
6. The *Number of Drivers* is 1.
7. *Target Refills* defines the number of Runs the OptimizerPlus will consider ideal for that truck. This value must be lower than the value in the *Routes to Schedule* table which defines the *Max Truck Refills* limit.
8. *Dollars Per Mile*, *Truck Tank Size*, and *Average Speed* values are entered per truck.
9. The Posting Division for the truck is the *Division*.
10. *Truck Tank Type* is P.
11. No action is needed for the *RRN* field.

## Schedule Log

Customer#	Name	Schedule Date	Driver	Truck	Run	Sequence	Tank RRN	EstGal2Del	Tk Stat	Elapsed Distance	Elapsed Time	Ticket#	GalDel
		06/27/2022	14	1122	1	1	18,029	45.00	dt+	33.70	2.30	0	0.00
		06/27/2022	14	1122	1	2	20,670	90.00	dt+	34.30	2.60	0	0.00
		06/27/2022	14	1122	1	3	11,952	150.00	dt+	38.10	2.90	0	0.00
		06/27/2022	14	1122	1	4	14,126	83.00	kf+	41.40	3.10	0	0.00
		06/27/2022	14	1122	1	5	29,207	72.00	dt+	47.00	3.40	0	0.00
		06/27/2022	14	1122	2	1	6,679	600.00	dt+	84.90	4.60	0	0.00
		06/27/2022	14	1122	2	2	28,341	40.00	dt+	96.70	5.10	0	0.00
		06/27/2022	14	1122	2	3	9,197	150.00	dt+	109.90	5.60	0	0.00
		06/27/2022	14	1122	2	4	29,332	71.40	kf+	138.30	6.40	0	0.00
		06/27/2022	14	1122	2	5	17,388	61.10	kf+	151.70	6.90	0	0.00
		06/27/2022	14	1122	2	6	26,767	62.30	kf+	157.90	7.20	0	0.00
		06/27/2022	14	1122	2	7	9,150	50.00	dt+	159.40	7.40	0	0.00
		06/27/2022	14	1122	2	8	23,080	200.00	kf+	170.70	7.90	0	0.00
		06/27/2022	14	1122	2	9	22,900	60.00	dt+	181.00	8.30	0	0.00

Import Seq  Import Date  Import Time  Fraction Full Before Delivery   
 Beginning YRT  Ending YRT

This table will show schedule information for current and historical schedules.

## Modifications to Driver/Truck Settings

### Driver Changes

#### Update Driver Hours

1. **Table** – Browse Driver Extensions
2. **Ctrl+M** to modify *Target* and *Max Hours* fields

## Move Driver Route Assignment

1. **Table** – Driver Maintenance
2. **Verify/Add** driver to Energy Force Driver Maintenance
3. **Table** – Browse Driver Extensions
4. **Verify/Add** driver with all fields completed
5. **Table** – Routes to Schedule
6. **Ctrl+M** to modify the *Div/Driver Assigned* fields

## Truck Changes

### Update Truck Division

- **Table** – *Browse Truck Extensions*
  - Modify the *Division* field for the truck entry
- **Table** – *Browse Driver Extensions*
  - Modify the *Truck Division* for the Truck
- **Table** – *Routes to Schedule*
  - Modify the *Div/Truck Assigned* field

### Move Truck to New Route/New Driver

- **Table** – *Routes to Schedule*
- **Table** – *Driver Extensions*

### Modify Truck Refill Limit

- **Table** – *Browse Truck Extensions*
- **Table** – *Routes to Schedule*

### Modify Truck Information

- **Table** – *Browse Truck Extensions*
  - Gallons Per Minute
  - Max Fill Perc
  - Dollars Per Mile
  - Average Speed

## Route Changes

### Modify Route Yard

- **Table** – *Yard and Remote Tanks GPS*

## Important Considerations

1. The Route/Driver/Truck relationship must match between the *Routes to Schedule*, *Browse Driver Extensions*, and *Browse Truck Extensions* tables.

Routes to Schedule									
Division	Route	Truck Division	Truck Assigned		Driver Division	Driver Assigned	Max Truck Refills	Target Threshold	Limit Threshold
1 SOFTWARE SOLUTIONS INTEGRATED	1 EAST AVON	10	4456	2021 FREIGHTLIN	1	14 BRANDY WILLIAMS	3	0.3	0.2

Browse Driver Extensions							
Division Number	Driver	Driver Type	Pay Rate	Target Hours	Max Hours	Truck	Truck Division
1	14	hourly	20	8	10	4456	10

Browse Truck Extensions										
Truck	Starting Fill Perc	Gallons Per Minute	Max Fill Perc	Number of Drivers	Target Refills	Dollars Per Mile	Truck Tank Size	Division	Truck Tank Type	Average Speed
4456	0	45	0.8	1	3	4.5	3200	10	P	40

2. There can only be one *Yard* assigned to a *Route* and there must be a *Yard* assigned to a *Route*.
3. *Customer/Delivery Type Matrix* must have the *Optigistics Tank Type* of A, J, or C populated.
4. A driver's hours must be between 4 - 18.
5. All percentages are entered in decimal form in every *Optimizer Maintenance* table.