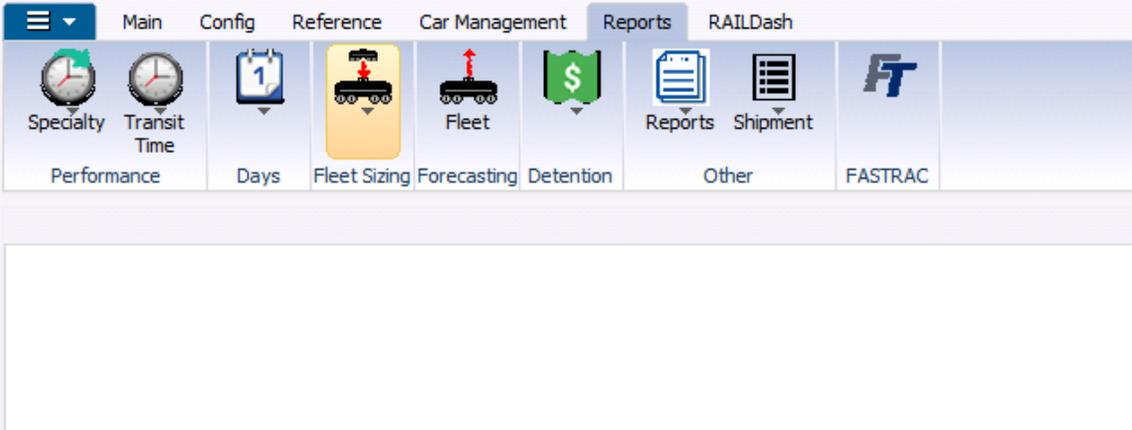


Fleet Sizing

The Fleet Sizing function under the Utilities menu enables you to create various fleet sizing analysis scenarios. The scenarios are used to determine car requirements by fleet, business group, fleet/business group. The scenarios created can be saved for future reference and can be modification as situations change.

The function allows analysis and fleet size based upon historical performance or a query can be built that, with minimum input, will provide the number of cars required to complete a movement of product.

The Fleet Sizing report is accessed by selecting **Fleet Sizing** from the **Reports** tab.



Selecting Fleet Sizing and Queries and entering All in the Get Data Box returns a list screen. The screen will either be blank, if no previous queries have been saved, or a display of previously created fleet sizing queries will return. Queries can be built for personal use and functionality also exists that allows the query to be retrieved and viewed by others. The creator of the query determines whether the query is for personal or open use.

The Maintain Fleet Size list screen provides the following information:

- **User Name.** The system stores the user ID of the user that creates and saves each query.
- **Query Name.** Each query that is saved must be given a unique name. For easy recognition the name should be indicative of the analysis being performed.
- **System Wide.** This is the control that makes the query personal to the user if set to “N” for NO, or open to public viewing if set as “Y” for YES.
- **Period.** Defines the period for the sizing analysis as either Monthly, Quarterly or Yearly.
- **Unit of Measure.** Indicates the units of measure.
- **Period Volume.** Defines the amount of product to be moved in the defined period.
- **Peak Volume.** Defines a peak volume within the period that is higher than the average period volume. For example, during a first quarter sizing analysis of the peak volume may show that January has twice as much volume as the other two months in that quarter.
- **Avg Load Capacity.** Defines the average capacity of the cars to be used in this service.

The following is a typical Maintain Fleet Sizing list screen:

User Name	Query Name	System Wide	Period	Unit Of Measure	Period Volume	Peak Volume	Avg Load Capacity
SA	SR1	Y	Y	Gals	10,485,000.00	873,750.00	96.00
SA	SR2	Y	Y	Gals	10,485,000.00	873,750.00	96.00
SA	SR12	Y	Y	Gals	10,485,000.00	873,750.00	96.00
SA	TEST1	Y	Y	Gals	0.00	0.00	0.00
SA	TEST2	Y	Y	Gals	0.00	0.00	0.00
SA	TEST3	Y	Y	Gals	0.00	0.00	0.00
SA	SR3	Y	Y	Gals	0.00	0.00	0.00
SA	SR4	Y	Y	Gals	0.00	0.00	0.00
SA	SR5	Y	Y	Gals	0.00	0.00	0.00
SA	SR6	Y	M	Gals	0.00	0.00	0.00
SA	BILLINGS ASPHALT FLEET	Y	Y	Gals	73,000,000.00	6,125,000.00	20,500.00
SA	ADHESIONS	Y	Y	Gals	42,653,351.00	3,554,446.00	176,254.00
SA	BILLINGS ASPHALT FLEET1	Y	Y	Gals	73,000,000.00	6,125,000.00	20,500.00
SA	BILLINGS ASPHALT FLEET2	Y	Y	Gals	73,000,000.00	6,125,000.00	20,500.00

Fleet Sizing detail screen: Double click on one of the queries to show the Fleet Sizing detail screen

Queries X

Row 13 of 54

Sort By Column: Asc

Find Column: Where: Value: And/Or

Mail Get Data Delete
Print Setup New Update Look up Fleet Sizing Detail
Print Close Save As List

View GD Add Delete Apply Reset Save Select

Query Name: BILLINGS ASPHALT FLEET1

Entity: By Fleet By Business Group By Fleet/Business Group

Period: Month Quarter Year

Transit Time Date Range: Begin Date: 01/01/06 End Date: 07/31/06 System Wide Query

Fleet: Bus Grp: Unit of Measure: Gals

Period Vol (units/period): 73,000,000.00 Use Rateably

Peak Volume (units): 6,125,000.00 Out of Service 0-100%: 0 5.00 Actual Plugin

Avg Loaded Capacity: 20,500.00

	Actual (days /trip)	Plugin (days/trip)	Use	Util%	Req Cars	Cur Cars	Delta
Transit Out:	9.00	0.00	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	24.00	94	0	94
Transit In:	15.00	0.00	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	39.00	157	0	157
Cust Hold:	6.00	0.00	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	16.00	63	0	63
Orig Hold:	9.00	0.00	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	21.00	84	0	84
Lease Track Hold:	0.00	0.00	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	0	0	0	0
	38.00	38.00		100.00	398	0	398

If the **New** button is selected the following blank screen will appear

RT Fleet Sizing Analysis

Query Name: User Name:

Entity
 By Fleet
 By Business Group
 By Fleet/Business Group

Period
 Month
 Quarter
 Year

Transit Time Date Range
 Begin Date: System Wide Query
 End Date:

Fleet ZERO TESTING **Bus Grp** WARREN **Unit of Measure:**

001	BAYWAY CHEM PLANT	1310	ESCOREZ (E-1310)
006	BR FUELS	2203	ESCOREZ (E-2203LC)
274	PAKTANK-DEER PARK	2510	ESCOREZ (E-2510)
275	PAKTANK-GALENA PAR	2596	ESCOREZ (E-2596)
3785	CENTENNIAL EAST NGL	2AR	JOLIET TRANSFER P

Period Vol (units/period): Use Rateably
Peak Volume (units): **Out of Service 0-100%:** Actual Plugin
Avg Loaded Capacity:

	Actual (days /trip)	Plugin (days/trip)	Use	Util%	Req Cars	Cur Cars	Delta
Transit Out:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Transit In:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Cust Hold:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Orig Hold:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Lease Track Hold:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Totals:	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

This screen provides the ability to create a new query that provides for the setting of the following defining fields:

- **Query Name** – all saved queries must have a file name applied. If multiple queries have been saved, the file name should be a reference to what the query is doing.
- **Entity** – defines the analysis to a Fleet, Business Group or a Fleet/Business Group combination. This field is only used if a fleet and or business group is defined in the fields to follow.
- **Period** – defines the period of analysis as a month, a quarter or a year.
- Whether using historical data and actuals or plug in data this field must be populated.
- **Transit Time Date Range** – If actuals are used, defines the amount of shipment history used to calculate transit times. No dates are required if plug in times are used.
- **System Wide Query** – when checked, opens this query to viewing by anyone with access to this functionality. If not checked, the query access is restricted to the user ID of the person who created it.
- **Fleet** – defines the fleet used if the analysis is by fleet or fleet/business group.
- **Business Group** – defines the business group used if the analysis is by business group or fleet/business group.
- **Unit of Measure** – defines the unit of measure to be applied against the Avg Loaded Capacity that is defined for each car. Whether using historical, actuals or plug in data, this field must be populated.
- **Period Vol (units/period)** – defines the amount of product to be moved for the period defined in the query. Whether using historical, actuals or plug in data, this field must be populated.
- **Use Rateably** – when checked, the Period Vol will be considered as moving at an even rate for the entire period. The Peak Vol will be calculated on a “by Month” basis for the period. If not checked, a Peak Vol must be entered in the Peak Vol field.
- **Peak Vol (units)** – will be defined by the system if the Use Rateably is checked.
- If Use Rateably is not checked, this volume must be entered. This also only applies if the analysis is for a quarter or a year.
- **Avg Loaded Capacity** – defines the average load carrying capacity of all cars to be used in this service.
- **Out of Service 0-100%** - defines the out of service time experienced either by a group of cars historically, or entered as a plug in.

When all of the above data is entered as required, clicking the **Calculate Fleet Size** button at the bottom of the screen will process the fleet size analysis. A sample fleet size analysis is shown below:

RT Fleet Sizing Analysis

Query Name: ZERO TESTING		User Name: KELLYA					
Entity <input checked="" type="radio"/> By Fleet <input type="radio"/> By Business Group <input type="radio"/> By Fleet/Business Group		Period <input type="radio"/> Month <input type="radio"/> Quarter <input checked="" type="radio"/> Year					
Transit Time Date Range Begin Date: 00/00/00 End Date: 00/00/00		<input type="checkbox"/> System Wide Query					
Fleet	00000 ZERO TESTING 001 BAYWAY CHEM PLANT 006 BR FUELS 274 PAKTANK-DEER PARK 275 PAKTANK-GALENA PAR 3785 CENTENNIAL EAST NGL	Bus Grp	1 WARREN 1310 ESCOREZ (E-1310) 2203 ESCOREZ (E-2203L) 2510 ESCOREZ (E-2510) 2596 ESCOREZ (E-2596) 2AR JOLIET TRANSFER F				
		Unit of Measure: LBS					
Period Vol (units/period): 4,397,656,397.00		<input type="checkbox"/> Use Rateably					
Peak Volume (units): 366,471,366.00		Out of Service 0-100%: 0 2.00 <input type="radio"/> Actual <input checked="" type="radio"/> Plugin					
Avg Loaded Capacity: 214,095.00							
	Actual (days /trip)	Plugin (days/trip)	Use	Util%	Req Cars	Cur Cars	Delta
Transit Out:	0	7	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	0.00	0	0	0
Transit In:	0	8	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	0.00	0	0	0
Cust Hold:	0	12	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	0.00	0	0	0
Orig Hold:	0	5	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	0.00	0	0	0
Lease Track Hold:	0	5	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	0.00	0		
Totals:	0.00	0.00			0	0	0

As shown, the remaining fields on the left of the screen will populate with Actual data from the historical trip information stored in the system. These fields are:

- **Transit Out** - defines the average transit time to the customer for the fleet and business group and Transit Time Date Range that was defined.
- **Transit In** - defines the average transit time from the customer back to origin for the fleet and business group and Transit Time Date Range that was defined.
- **Cust Hold** - defines the average expected hold time at the customer sight for the fleet and business group and Transit Time Date Range that was defined.
- **Orig Hold** - defines the average hold time for cars at origin from the return of a trip to the beginning of the next trip for the fleet and business group and Transit Time Date Range that was defined.
- **Lease Track Hold** - defines the average time cars remain at a lease track prior to going on to the customer for the fleet and business group and Transit Time Date Range that was defined.

All of the above transit times will be provided by the system when the Transit Time Date Range fields are populated with a Begin and End date and the Fleet and or Business Group is provided. When this is complete, the **Actual** button for each field will be activated.

Once the query has been created it can be saved by clicking the **Save Query** button at the bottom of the screen. The saved query can then be used to test possibilities if some of the data elements were different from the historical records used. The following is an example of the previous query only with plug in data for the Transit In, the Origin Hold and the Bad Order:

RT Fleet Sizing Analysis

Query Name: ZERO TESTING User Name: KELLYA

Entity: By Fleet Period: Month Transit Time Date Range: Begin Date: 00/00/00 System Wide Query
 By Business Group Quarter End Date: 00/00/00
 By Fleet/Business Group Year

Fleet	Entity	Bus Grp	Entity	Unit of Measure
0000	ZERO TESTING	1	WARREN	LBS
001	BAYWAY CHEM PLANT	1310	ESCOREZ (E-1310)	
006	BR FUELS	2203	ESCOREZ (E-2203L)	
274	PAKTANK-DEER PARK	2510	ESCOREZ (E-2510)	
275	PAKTANK-GALENA PAR	2596	ESCOREZ (E-2596)	
3785	CENTENNIAL EAST NGL	ZAR	JOLIET TRANSFER F	

Period Vol (units/period): 4,397,656,397.00 Use Rateably
Peak Volume (units): 366,471,366.00 Out of Service 0-100%: 0 20.00 Actual Plugin
Avg Loaded Capacity: 214,095.00

	Actual (days /trip)	Plugin (days/trip)	Use	Util%	Req Cars	Cur Cars	Delta
Transit Out:	0	7	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	0.00	0	0	0
Transit In:	0	15	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	54.00	1070	0	1070
Cust Hold:	0	12	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	0.00	0	0	0
Orig Hold:	0	13	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	46.00	927	0	927
Lease Track Hold:	0	5	<input checked="" type="radio"/> Actual <input type="radio"/> Plugin	0.00	0		
Totals:	0.00	28.00		100.00	1997	0	1997

To override an actual transit time the creator only needs to activate the Plug In button for the desired field and insert a user-defined number in the Plug In field to the right of the Actual field.

The transit times are declared in days and the calculations in the fields to the bottom right are:

- **Util%** - this is the percentage of time that the cars spend in each of the transit time categories and will total to 100% at the bottom.
- **Req Cars** - this is the required number of car needed to service each portion of the transit time and based on the Period Vol to be moved and the period it is to be moved in. The bottom number is the total number of cars in all categories.
- **Cur Cars** - based upon the fleet and or business group defined in the query this is the current number of cars available to move the Period Vol for the defined period. The bottom number is the total number of cars in all categories.
- **Delta** - this is the difference between the Req Cars and the Cur Cars. The bottom number is the variant total number of cars in all categories.

The following is an example of a fleet sizing analysis that can be performed by using all Plug in data:

RT Fleet Sizing Analysis

Query Name: TESTING ZERO User Name: KELLYA

By Fleet Month Begin Date: 00/00/00 System Wide Query
 By Business Group Quarter End Date: 00/00/00
 By Fleet/Business Group Year

Fleet: 00000 ZERO TESTING ▲ Bus Grp: 1 WARREN ▲ Unit of Measure: LBS
 001 BAYWAY CHEM PLANT 1310 ESCOREZ (E-1310) ▲
 006 BR FUELS 2203 ESCOREZ (E-2203LC
 274 PAKTANK-DEER PARK 2510 ESCOREZ (E-2510)
 275 PAKTANK-GALENA PAR 2596 ESCOREZ (E-2596)
 3785 CENTENNIAL EAST NGL ▼ 2AR JOLIET TRANSFER F ▼

Period Vol (units/period): 4,397,656,397.00 Use Rateably
 Peak Volume (units): 366,471,366.00 Out of Service 0-100%: 0 20.00 Actual Plugin
 Avg Loaded Capacity: 214,095.00

	Actual (days /trip)	Plugin (days/trip)	Use	Util%	Req Cars	Cur Cars	Delta
Transit Out:	0	7	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	13.00	499	0	499
Transit In:	0	15	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	29.00	1070	0	1070
Cust Hold:	0	12	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	23.00	856	0	856
Orig Hold:	0	13	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	25.00	927	0	927
Lease Track Hold:	0	5	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	10.00	357		
Totals:	0.00	52.00		100.00	3709	0	3709

This query constitutes the simplest calculation available and provides only a Req Car amount from the minimum required detail of Period Vol, Avg Loaded Capacity.

This can be expanded one level by adding a Fleet and or Business Group to get a Cur Car and Delta comparison as seen here:

RT Fleet Sizing Analysis

Query Name: TESTING ZERO User Name: KELLYA

By Fleet
 Month
 Transit Time Date Range: Begin Date: 00/00/00 System Wide Query
 By Business Group
 Quarter
 End Date: 00/00/00
 By Fleet/Business Group
 Year

Fleet: 00000 ZERO TESTING
 Bus Grp: 1 WARREN
 Unit of Measure: LBS
 001 BAYWAY CHEM PLANT
 1310 ESCOREZ (E-1310)
 006 BR FUELS
 2203 ESCOREZ (E-2203)
 2510 ESCOREZ (E-2510)
 274 PAKTANK-DEER PARK
 2596 ESCOREZ (E-2596)
 275 PAKTANK-GALENA PAR
 2AR JOLIET TRANSFER F
 3785 CENTENNIAL EAST NGL

Period Vol (units/period): 4,397,656,397.00 Use Rateably
 Peak Volume (units): 366,471,366.00
 Out of Service 0-100%: 0 20.00 Actual Plugin
 Avg Loaded Capacity: 214,095.00

	Actual (days /trip)	Plugin (days/trip)	Use	Util%	Req Cars	Cur Cars	Delta
Transit Out:	0	7	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	13.00	499	2	497
Transit In:	0	15	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	29.00	1070	4	1066
Cust Hold:	0	12	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	23.00	856	0	856
Orig Hold:	0	13	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	25.00	927	0	927
Lease Track Hold:	0	5	<input type="radio"/> Actual <input checked="" type="radio"/> Plugin	10.00	357		
Totals:	0.00	52.00		100.00	3709	6	3703