Profile Project

INC364	Introduction to Manufacturing Execution Systems
INC365	Introduction to Managerial and Financial Accountings for ERP System
INC382	Capstone Project II
INC362	Computer-based Monitoring and Control

Unnamed Project

Replications: 1 Time Units: Minutes

Key Performance Indicators

System

	Average
Number Out	3,082

Unnamed Project

Replications: 1 Time Units: Minutes

Entity

Time

VA Time	Average	Half Width	Minimum Value	Maximum Value
Truck	74.6801	0.217619776	51.9802	85.6590

NVA Time	Average	Half Width	Minimum Value	Maximum Value
Truck	0.00	0.000000000	0.00	0.00

Wait Time	Average	Half Width	Minimum Value	Maximum Value
Truck	143.57	18.29337	0.00	438.44

Transfer Time	Average	Half Width	Minimum Value	Maximum Value
Truck	25.0235	0.452321686	3.2293	90.1987

Other Time	Average	Half Width	Minimum Value	Maximum Value
Truck	0.00	0.000000000	0.00	0.00

Total Time	Average	Half Width	Minimum Value	Maximum Value
Truck	243.27	18.40422	68.7029	537.92

Other

Number In	Value
Truck	3083.00

Number Out	Value
Truck	3083.00

WIP	Average	Half Width	Minimum Value	Maximum Value
Truck	17.7866	1.65793	0.00	51.0000

Unnamed Project

Replications: 1 Time Units: Minutes

Queue

Time

Waiting Time

	Average	Half Width	Minimum Value	Maximum Value
Dispenser Machine Process.Queue	1.0978	0.109502982	0.00	66.9376
Empty Weight Station Process.Queue	32.7342	5.98357	0.00	145.86
Entrance Gate Process.Queue	0.00	0.000000000	0.00	0.00
Exit Station Process.Queue	0.02134141	0.002770669	0.00	0.9999
Loaded Weight Station Process.Queue	4.1958	0.318811172	0.00	31.7989
Sale Office Process.Queue	9.8924	1.25253	0.00	64.2434
Wait for the Queue at Entrance Gate Hold Gas.Queue	95.5858	14.97138	0.00	333.16

Other

Number Waiting

	Average	Half Width	Minimum Value	Maximum Value
Dispenser Machine Process.Queue	0.07579366	0.009479086	0.00	1.0000
Empty Weight Station Process.Queue	2.2600	0.490998067	0.00	19.0000
Entrance Gate Process.Queue	0.00	(Insufficient)	0.00	0.00
Exit Station Process.Queue	0.00147344	(Insufficient)	0.00	1.0000
Loaded Weight Station Process.Queue	0.2897	0.033557443	0.00	4.0000
Sale Office Process.Queue	0.6830	0.112718789	0.00	13.0000
Wait for the Queue at Entrance Gate Hold Gas.Queue	6.5994	1.02798	0.00	38.0000

Unnamed Project

Replications: 1 Time Units: Minutes

Resource

Usage

Instantaneous Utilization	Average	Half Width	Minimum Value	Maximum Value
Card Reader	0.1039	0.006258633	0.00	1.0000
Counter Of Sale Office	0.3789	0.025953820	0.00	1.0000
Disperser Machine	0.5310	0.030516477	0.00	1.0000
Empty Weights	0.5205	0.035172389	0.00	1.0000
Loaded Weights	0.5185	0.029240573	0.00	1.0000
Printer	0.06904122	0.003862083	0.00	1.0000

Number Busy	Average	Half Width	Minimum Value	Maximum Value
Card Reader	0.1039	0.006258633	0.00	1.0000
Counter Of Sale Office	0.7579	0.051907640	0.00	2.0000
Disperser Machine	3.1862	0.183098863	0.00	6.0000
Empty Weights	0.5205	0.035172389	0.00	1.0000
Loaded Weights	0.5185	0.029240573	0.00	1.0000
Printer	0.06904122	0.003862083	0.00	1.0000

Number Scheduled	Average	Half Width	Minimum Value	Maximum Value
Card Reader	1.0000	(Insufficient)	1.0000	1.0000
Counter Of Sale Office	2.0000	(Insufficient)	2.0000	2.0000
Disperser Machine	6.0000	(Insufficient)	6.0000	6.0000
Empty Weights	1.0000	(Insufficient)	1.0000	1.0000
Loaded Weights	1.0000	(Insufficient)	1.0000	1.0000
Printer	1.0000	(Insufficient)	1.0000	1.0000

Unnamed Project

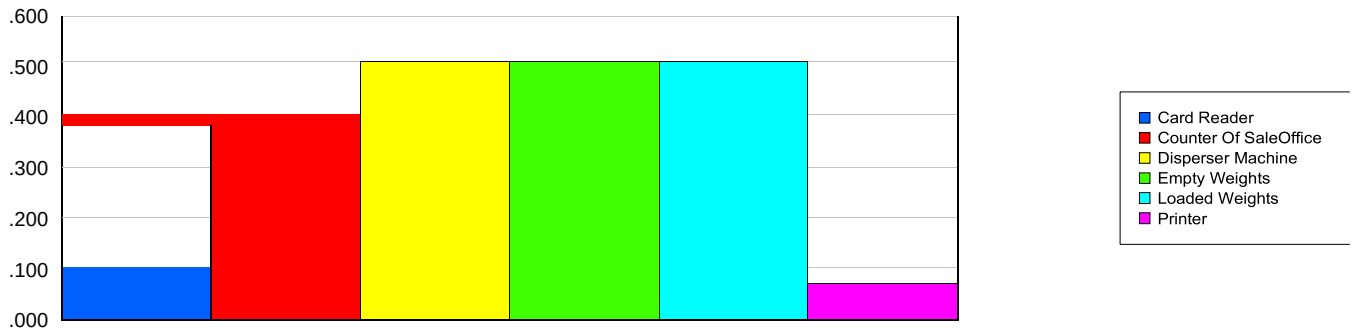
Replications: 1 Time Units: Minutes

Resource

Usage

Scheduled Utilization

	Value
Card Reader	0.1039
Counter Of Sale Office	0.3789
Disperser Machine	0.5310
Empty Weights	0.5205
Loaded Weights	0.5185
Printer	0.06904122



Total Number Seized

	Value
Card Reader	3082.00
Counter Of Sale Office	3082.00
Disperser Machine	3082.00
Empty Weights	3082.00
Loaded Weights	3082.00
Printer	3082.00

Application design description

Definition

- Outstanding PO is the items with unreceived quantity. It is the purchase order that haven’t been completed.
- Cost of Goods Sold is the direct costs attribute to production of good sold in company. This amount includes cost of material used in creating good along with the direct labor costs used to produce good.
- Revenue is the income generated from sale of goods or services.
- Profit is also called net income, it is the amount of earnings that exceed expense for a period.
- Loss is the amount of money lost by business or organization.
- Operating Expense is the costs that associated with company’s main operating activities which are reported on income statement.
- Net Income is the excess of revenues over expense.
- Beginning Inventory is recorded cost of inventory in a company’s accounting record at the start of an accounting period.

- Dashboard for MES

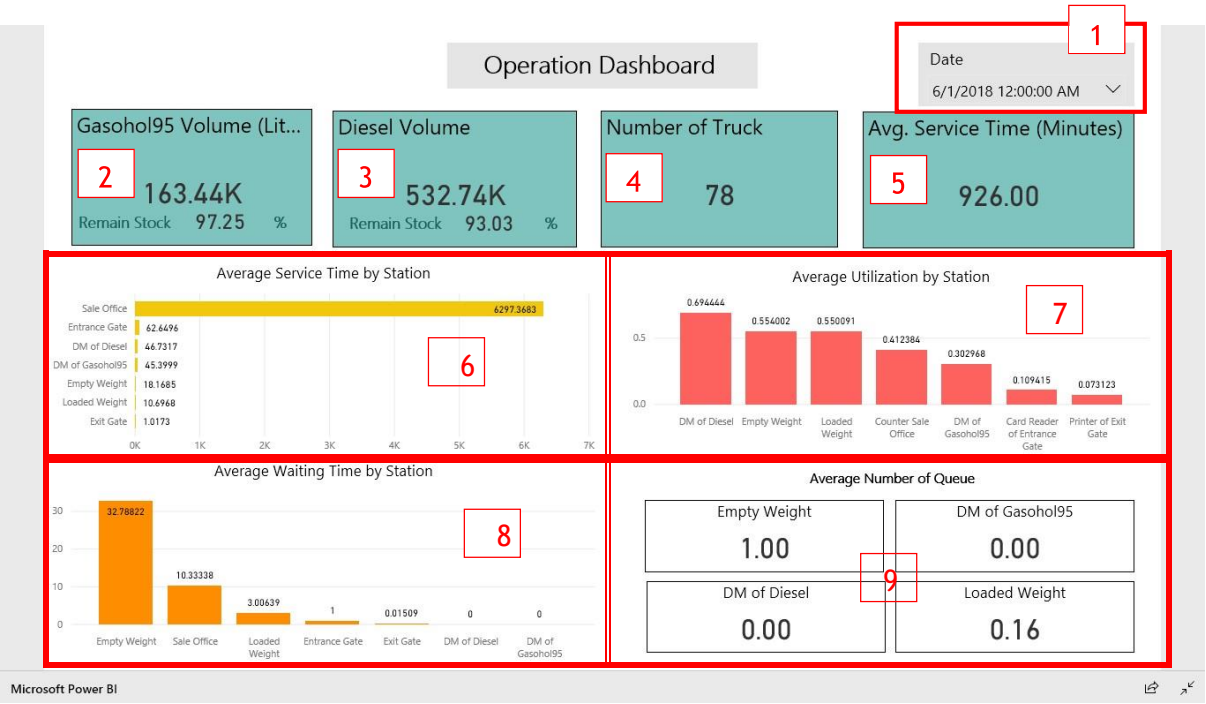


Figure 7.1 Operation Dashboard (Daily)

1 – This part can choose the date to show information on that date.
2 – Show volume and percentage remaining of Gasohol95.
3 – Show volume and percentage remaining of Diesel.
4 – Show Number of truck that count the truck on each day.
5 – Show Total Average service time on that day.
6 – Show Average service time at each station on that day.
7 – Show Average utilization at each station on that day.
8 – Show Average waiting time at each station on that day.
9 – Show Average Number of queue at each station on that day by choose to show only 4 station which are empty weight, DM of Gasohol95, DM of Diesel, Loaded Weight because these stations can tell how many queues that truck have to wait. If it has high number, we can know which station that we have to improve.

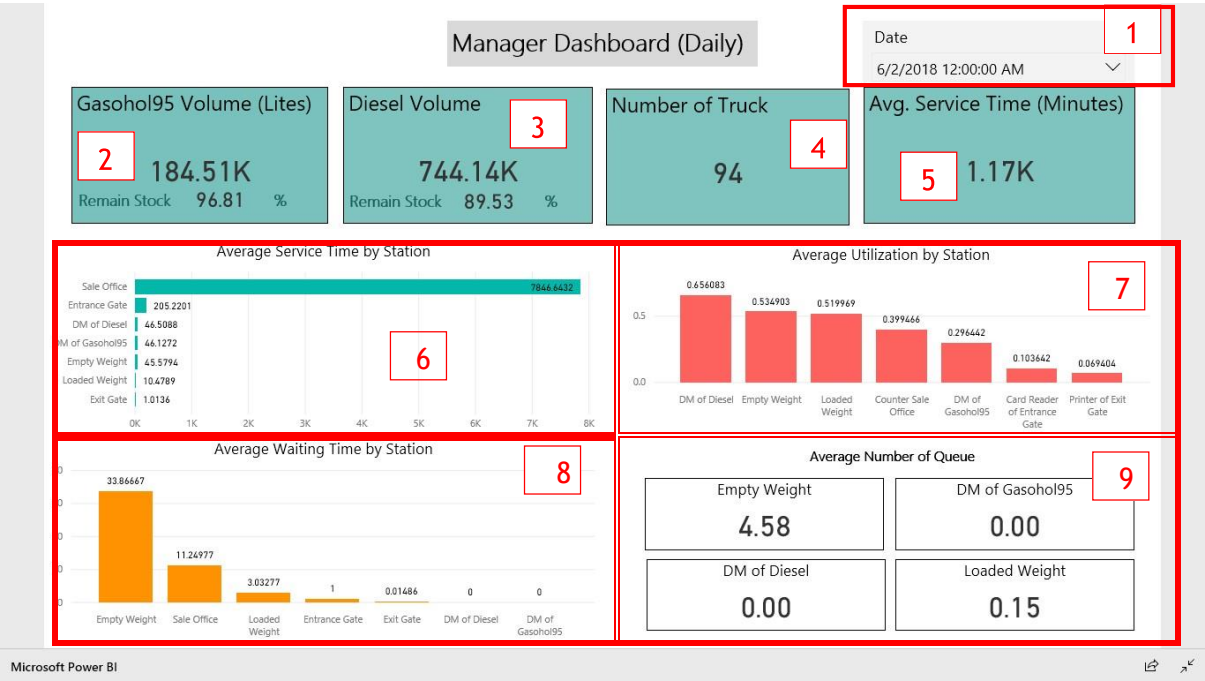


Figure 7.2 Manager Dashboard (Daily)

1 – This part can choose the date to show information on that date.
2 – Show volume and percentage remaining of Gasohol95.
3 – Show volume and percentage remaining of Diesel.
4 – Show Number of truck that count the truck on each day.
5 – Show Total Average service time on that day.
6 – Show Average service time at each station on that day.
7 – Show Average utilization at each station on that day.
8 – Show Average waiting time at each station on that day.
9 – Show Average Number of queue at each station on that day by choose to show only 4 station which are empty weight, DM of Gasohol95, DM of Diesel, Loaded Weight because these stations can tell how many queues that truck have to wait. If it has high number, we can know which station that we have to improve.

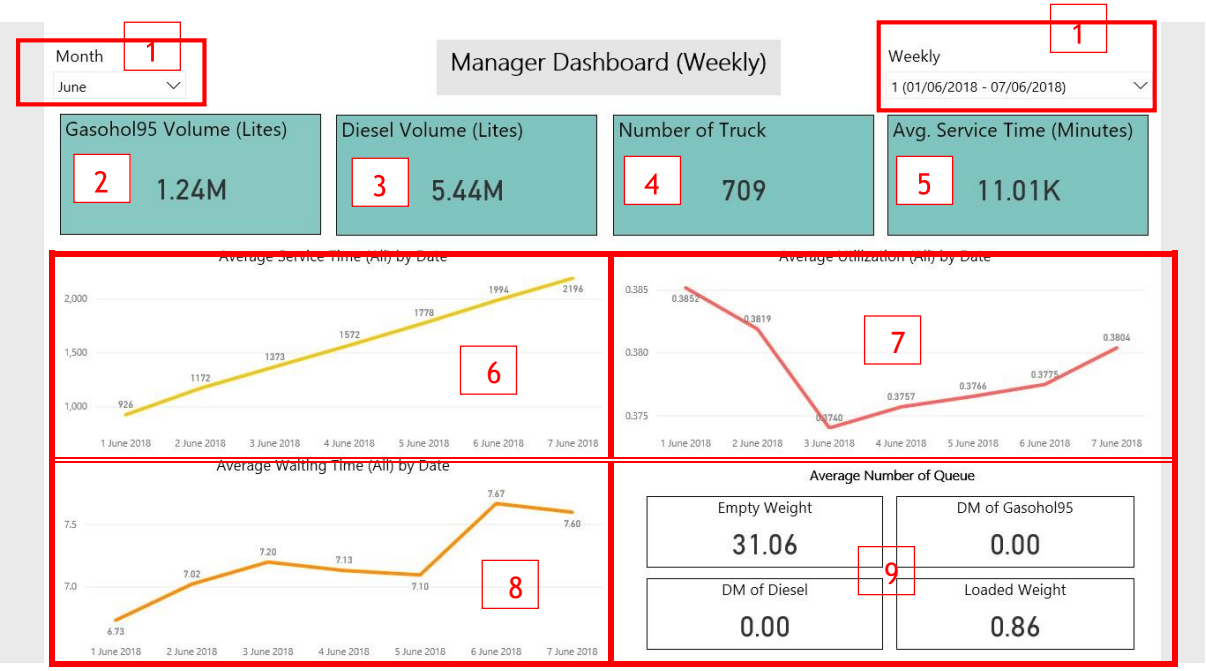


Figure 7.3 Manager Dashboard (Weekly)

1 – This part can choose Month and week which if we choose month, it will show range of week on the month that we have choose.
2 – Show volume of Gasohol95 that already filled on that week.
3 – Show volume of Diesel that already filled on that week.
4 – Show Number of truck that count the truck on that week.
5 – Show Total Average service time on that week.
6 – Show Average service time at each station on that week.
7 – Show Average utilization at each station on that week.
8 – Show Average waiting time at each station on that week.
9 – Show Average Number of queue at each station on that week by choose to show only 4 station which are empty weight, DM of Gasohol95, DM of Diesel, Loaded Weight because these stations can tell how many queues that truck have to wait. If it has high number, we can know which station that we have to improve.

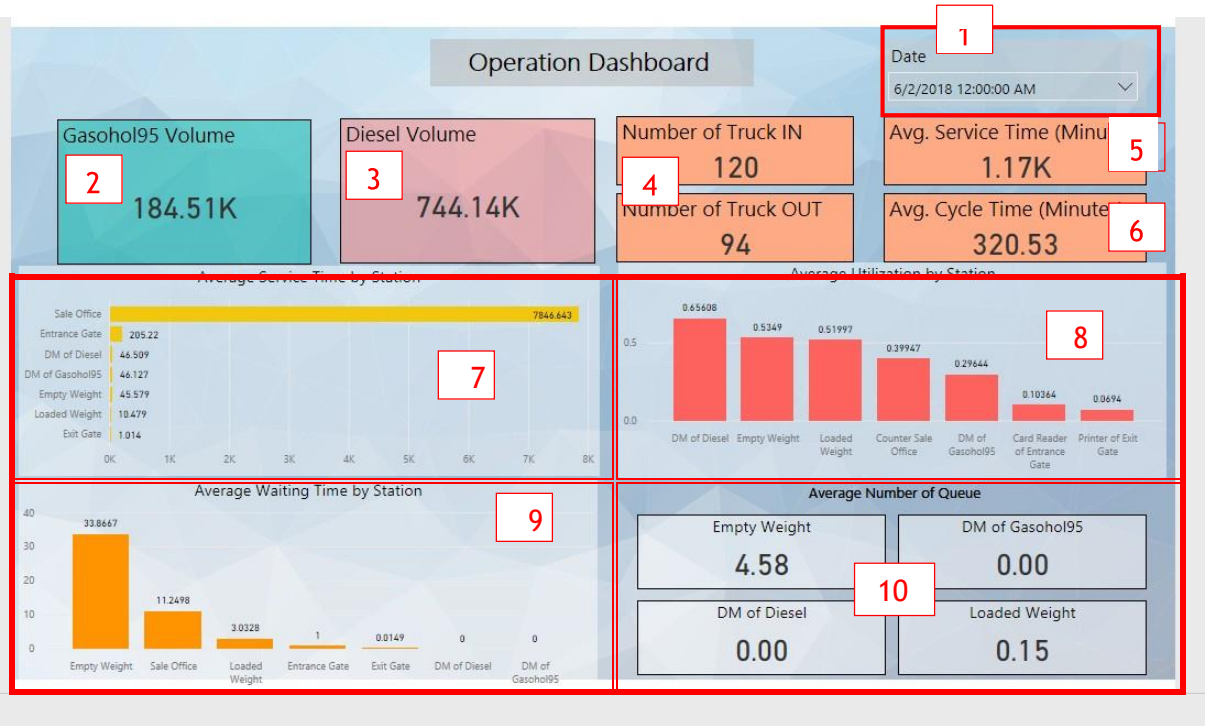


Figure 7.5 Operation Dashboard (Finance)

1 – This part can choose the date to show information on that date.
2 – Show volume of Gasohol95 that have fill on that day.
3 – Show volume of Diesel that have fill on that day.
4 – Show number of truck in/out on that day.
5 – Show average service time of every station on that day.
6 – Show average cycle time on that day.
7 – Show average service time at each station on that day.
8 – Show average utilization at each station on that day.
9 – Show average waiting time of queue at each station on that day.
10 – Show Average Number of queue at each station on that day by choose to show only 4 station which are empty weight, DM of Gasohol95, DM of Diesel, Loaded Weight because these stations can tell how many queues that truck have to wait. If it has high number, we can know which station that we have to improve.

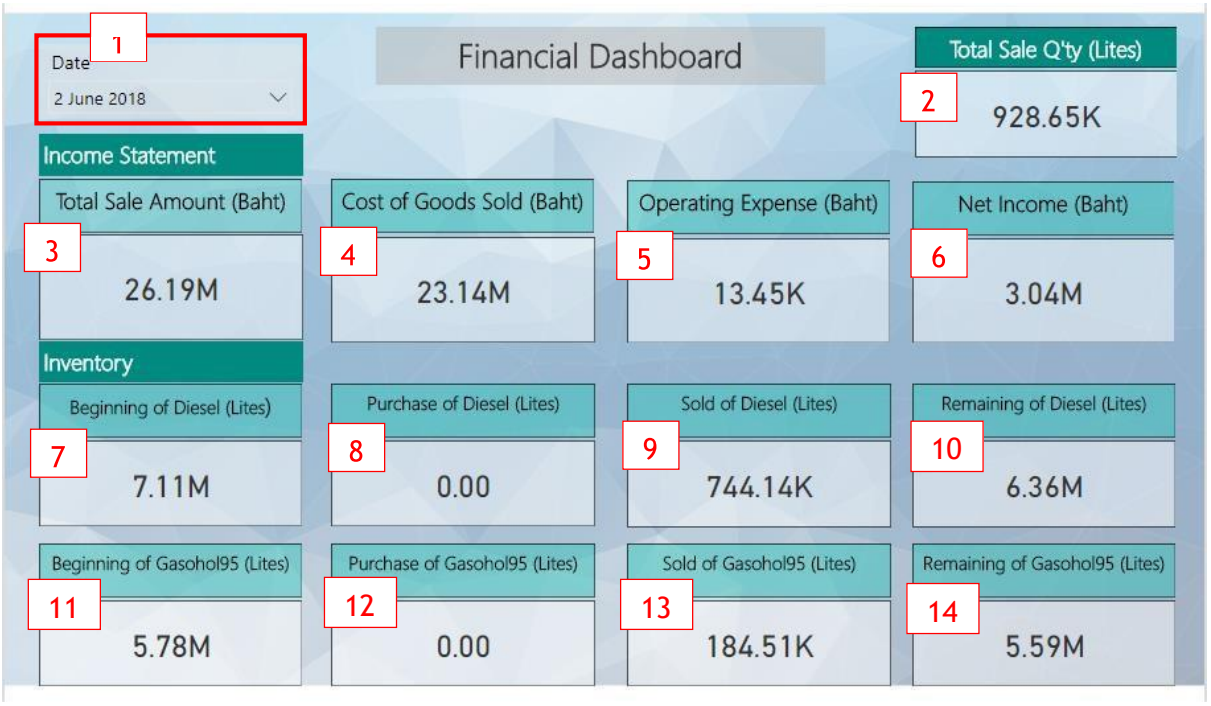


Figure 7.6 Financial Dashboard

1 – This part can choose the date to show the information on that date.

2 – Show the Total Sale Q'ty in liters by calculating from

Formula: Total Sale Q'ty = (Total filling amount of Gasohol95 + Total filling amount of diesel) + Total Sale Q'ty of previous day.

3 – Show Total Sale Amount in Baht by calculating from

Formula: Total Sale Amount = [(Total filling amount of Gasohol95 x Price of Gasohol95) + (Total filling amount of diesel × Price of Diesel)] + Total Sale Amount of previous day.

4 – Show Cost of Goods Sold in Baht by calculating from

Formula: Cost of Goods Sold = [(Total filling amount of Gasohol95 x Cost of Gasohol95) + (Total filling amount of diesel x Cost of Diesel)] + Cost of Goods Sold of previous day.

5 – Show Operating Expense by calculating from

Formula: Operating Expense = [(500×2) + (700) + (400×2) + (550) + (9500) + (150.6849315×6)].

6 – Show Net Income in Baht by calculating from

Formula: Net Income = (Total Sale Amount – Cost of Goods Sold – Operating Expense) + Net Income of previous day.

7 – Show Beginning of Diesel in Liters by calculating from

Formula: Beginning = (Total Amount of Gasohol95 + Total Amount of Diesel).

8 – Show Purchase of Diesel in Liters.

9 – Show Sold of Diesel in Liters

Formula: Sold = (Total filling amount of Gasohol95).

10 – Show Remaining of Diesel in Liters

Formula: Remaining = (Beginning + Purchase - Sold).

11 – Show Beginning of Gasohol95 in Liters by calculating from

Formula: Beginning = Remaining Gas + Purchase.

12 – Show Purchase of Gasohol95 in Liters.

13 – Show Sold of Gasohol in Liters

Formula: Sold = (Total filling amount of Diesel).

14 – Show Remaining of Gasohol95 in Liters

Formula: Remaining = (Total amount of Gasohol95 – Filling amount of Gasohol95).

Figure 7.7 Purchase Order

1 – This part we can choose the date and PO No. to show the information that we want

2 – Show the information of Payment No., Customer ID, Customer Name, Tax Payer ID of the Date and PO No. that have choose

3 – Show about Gas Type of the date and PO No. that have choose

4 – Show the value of price per liter of the date and PO No. that have choose

5 – Show amount of gas of PO No. according to the chosen date

6 – Show the price of gas that have order by calculating from

Formula: Price of gas = (Price per liter) × (Q'ty)

7 – Show the total price that have to pay by summing the amount value

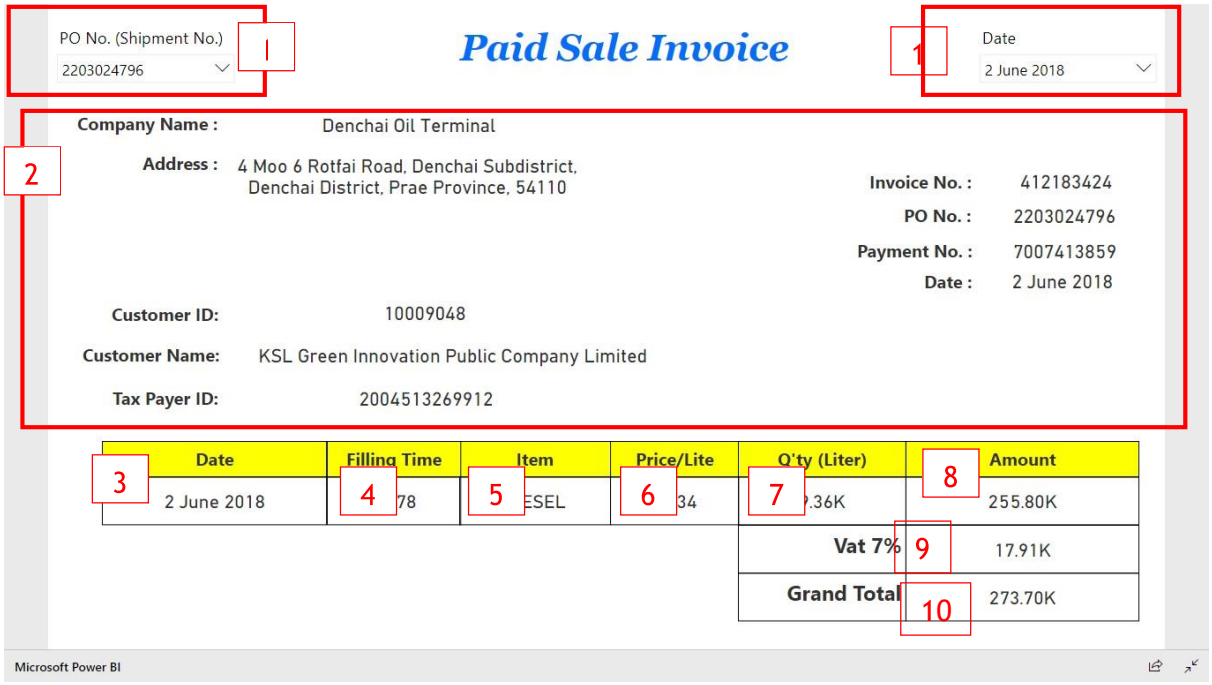


Figure 7.8 Paid Sale Invoice

1 – This part can choose Date and PO No. to show the information that we want.
2 – Show information of Company Name, Address, Invoice No., Payment No., Customer ID, Customer Name, Tax Payer ID of Date and PO No. that have choose.
3 – Show the date that have choose.
4 – Show process time.
5 – Show about Gas type of the date and PO No. that have choose.
6 – Show the value of price per liter of the date and PO No. that have choose.
7 – Show amount of gas of PO No. according to the date that have been choose.
8 – Show the price of gas that have order by calculating from
Formula: Price of gas = (Price per liter) × (Q'ty).
9 – Show amount of Vat 7% by calculating from
Formula: Vat 7% = (7/100) x (Amount).
10 – Show the total price that have to pay by calculating from
Formula: Grand Total = Vat 7% + Amount

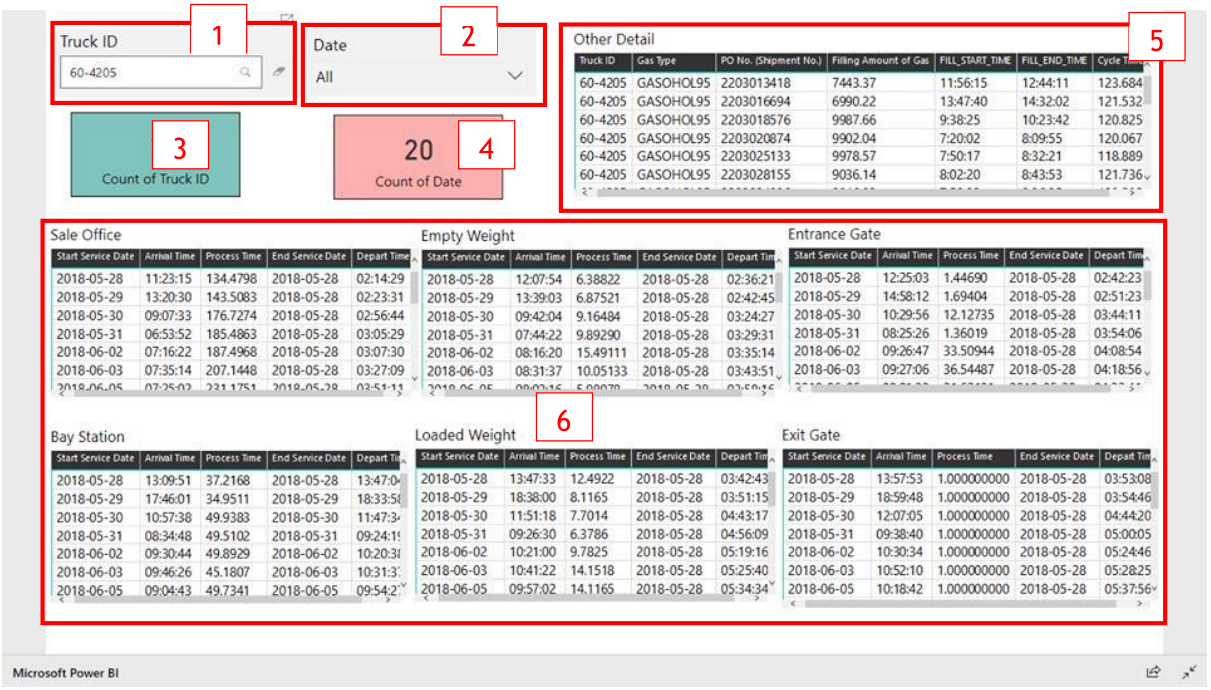


Figure 7.10 History Search (1)

This picture shows the example of search by searching from truck ID to show the date that truck ID come in by showing number of day on display (No.4) and the detail in each day (No.5 and No.6).

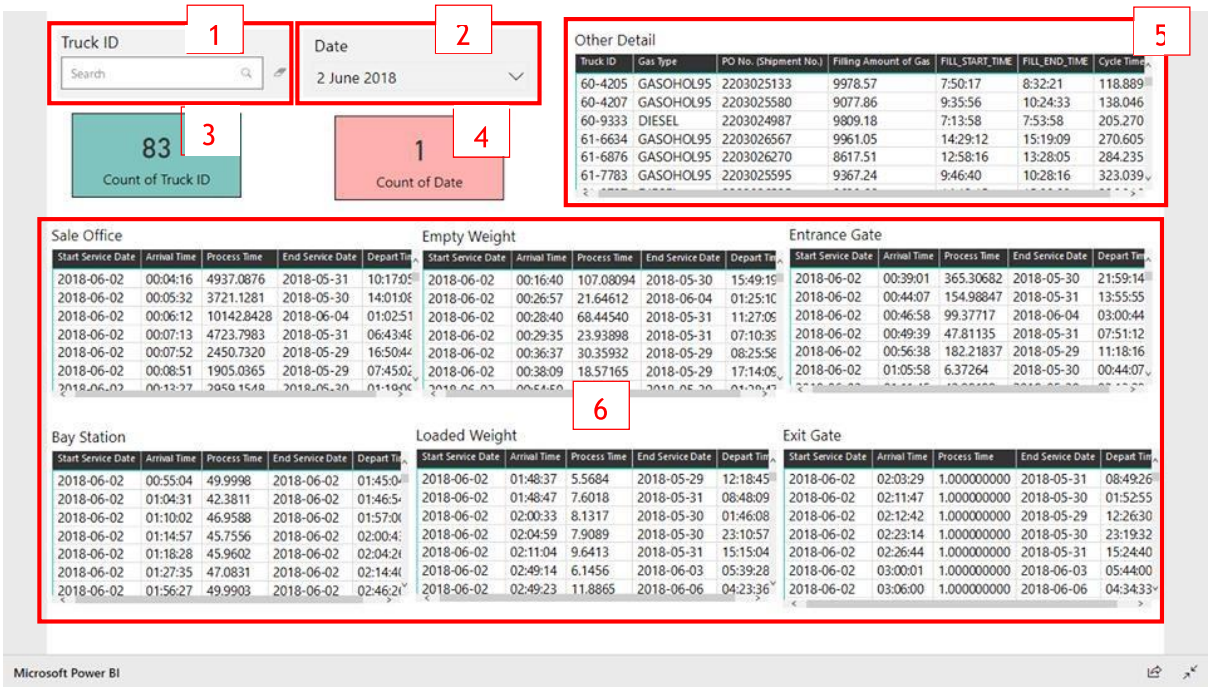


Figure 7.11 History Search (2)

This picture shows the example of search by searching from date to show the date that truck ID come in by showing number of truck ID on display (No.3) and detail of each truck ID (No.5 and No.6)

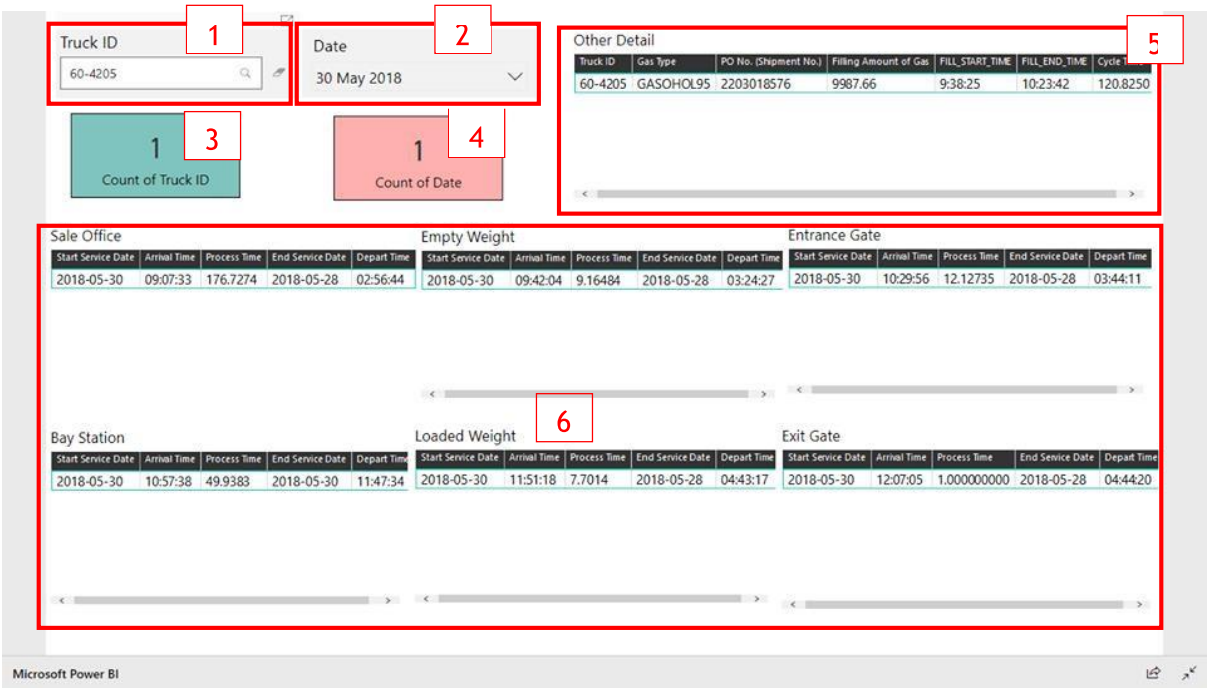


Figure 7.12 History Search (3)

This picture shows the example of search by searching from truck ID and date to show the detail (No.5 and No.6) of date and truck ID that we have choose

Web Page

1 HOME Page (First Page) of the website

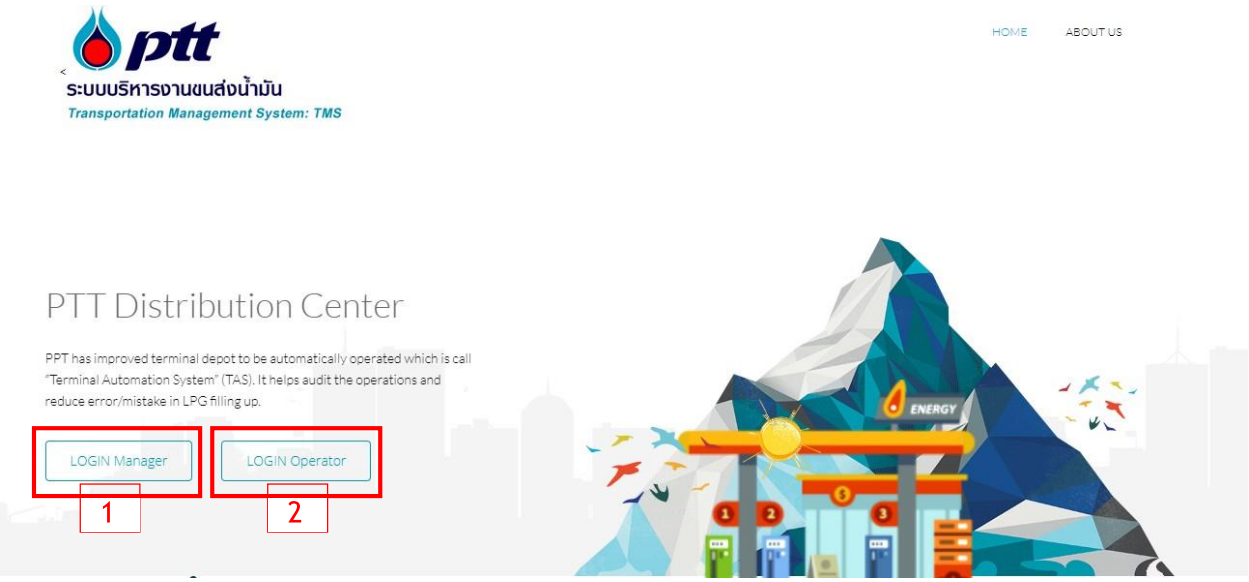


Figure 10.1 Home Page

There are 2 functions to choose:
1. LOG IN Manager
2. LOG IN Operator

Manager's Part

2 If you choose to log in as manager, you have to enter Username: manager Password: inc

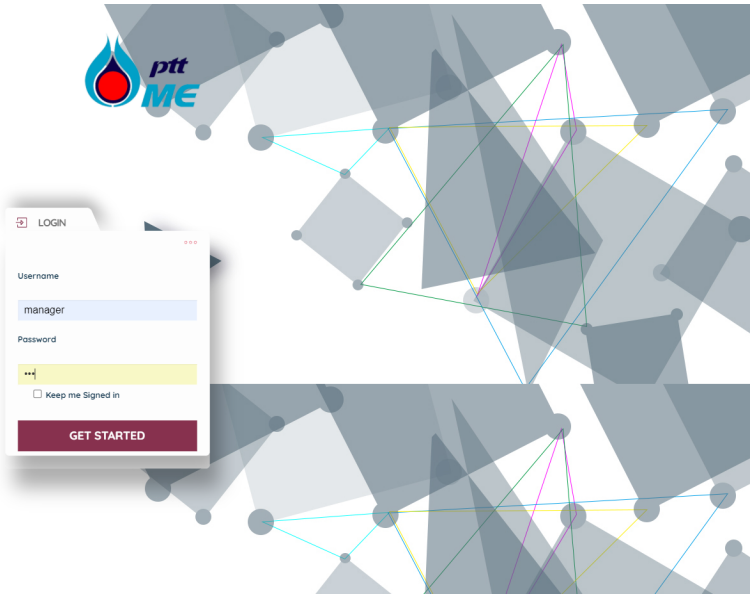


Figure 10.2 Log in page for manager

2 Once a manager log in, there are 3 options

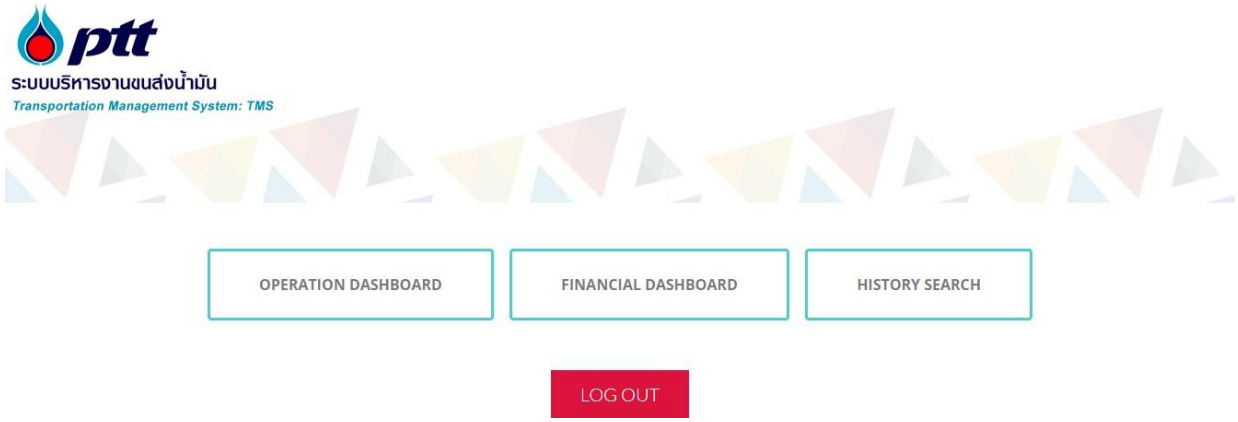


Figure 10.3 Manager Log in

- Operation Dashboard
- Financial Dashboard
- Tracking Time

3 If you choose Operation Dashboard, there are 2 options

- Manager Dashboard (Daily)

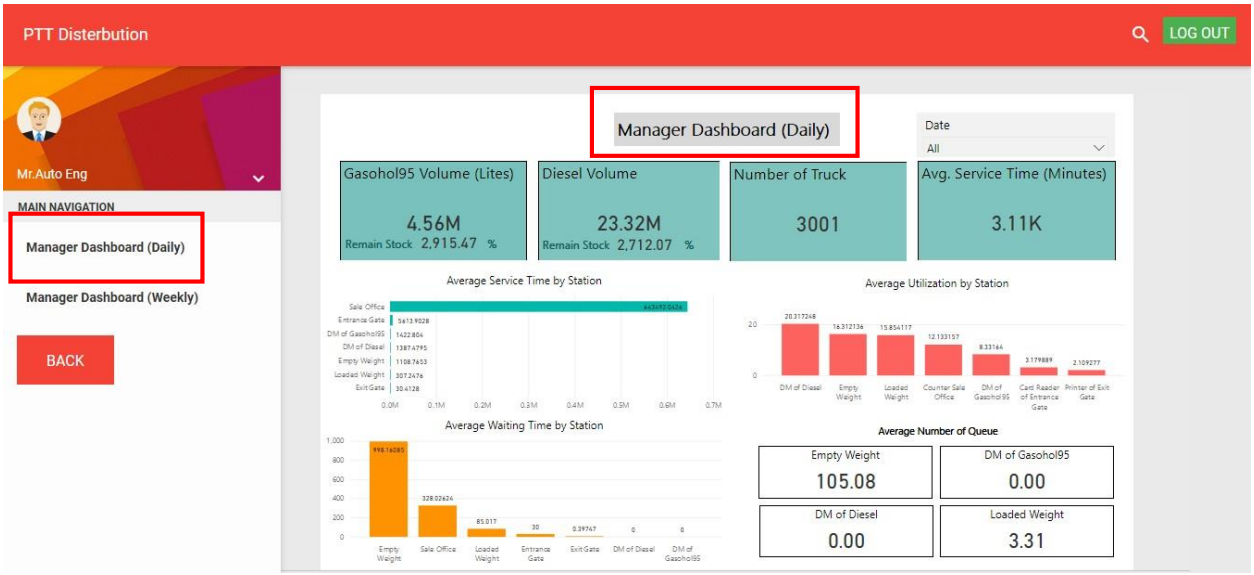


Figure 10.4 Manager Dashboard (Daily) in Web page

- Manager Dashboard (Weekly)

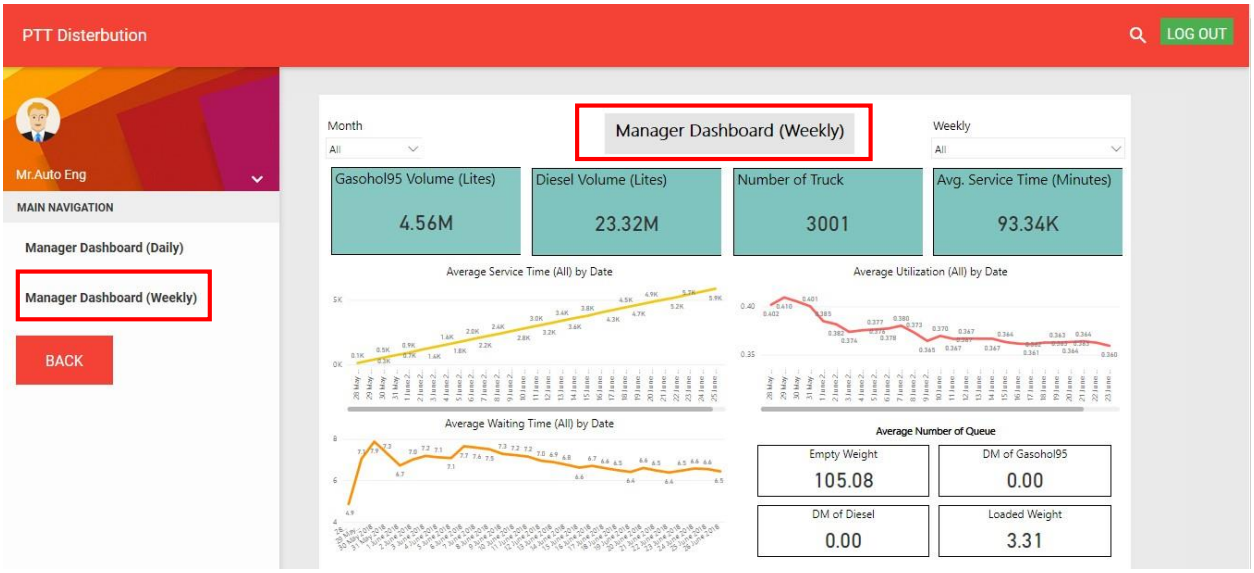


Figure 10.5 Manager Dashboard (Weekly) in Web page

4 If you choose Financial Dashboard, there are 5 options

- Overview Dashboard

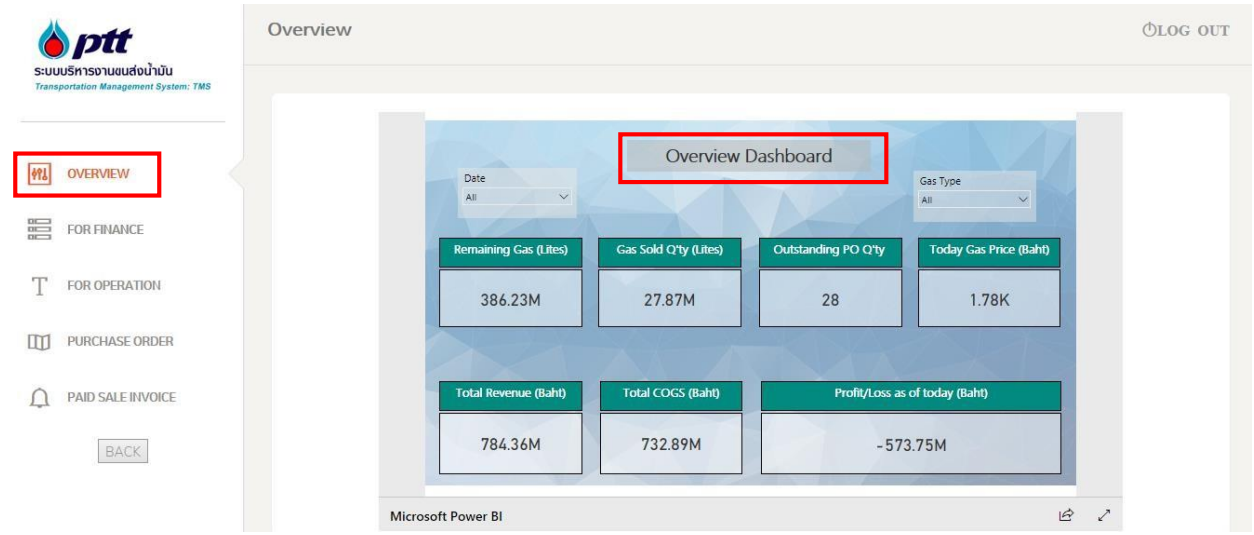


Figure 10.6 Overview Dashboard (Finance) in Web page

This picture show date that we choose and Gas Type -> The information will change according to the date and gas type that we select.

- For Operation

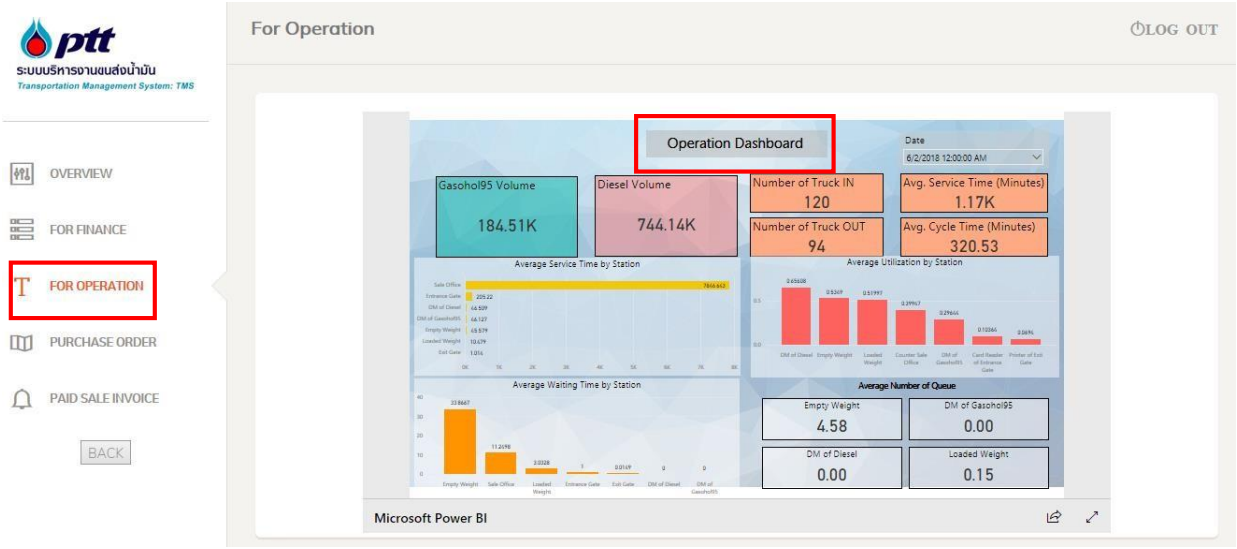


Figure 10.7 Operation Dashboard (Finance) in Web page

Select Date -> Information will change according to the one that we select

- For Finance

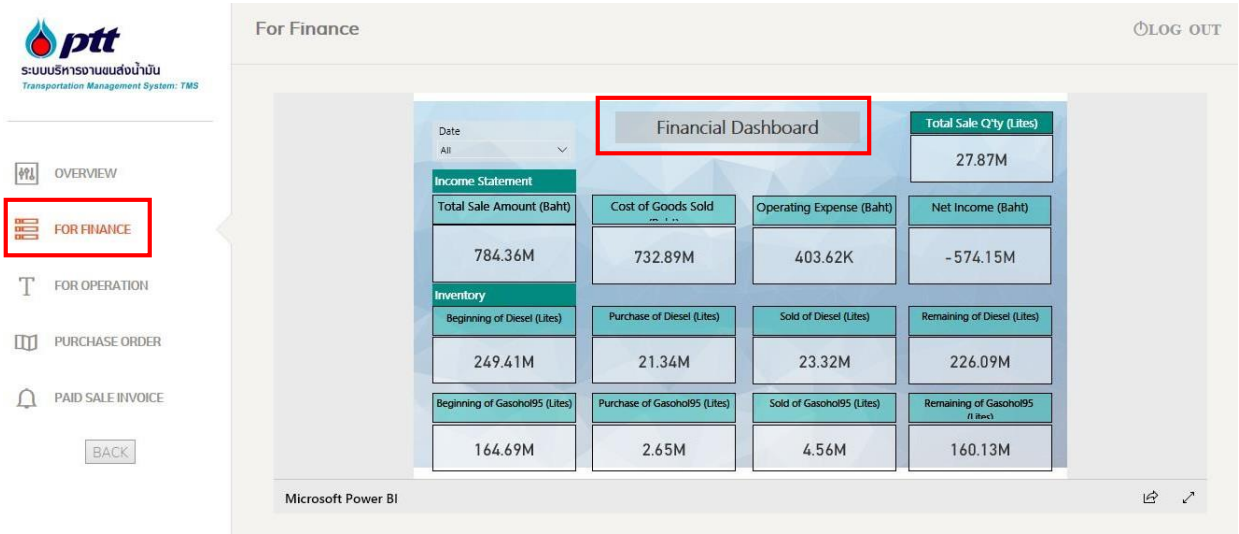


Figure 10.8 Financial Dashboard (Finance) in Web page

Select Date -> Information will change according to the one that we select

- Purchase Order

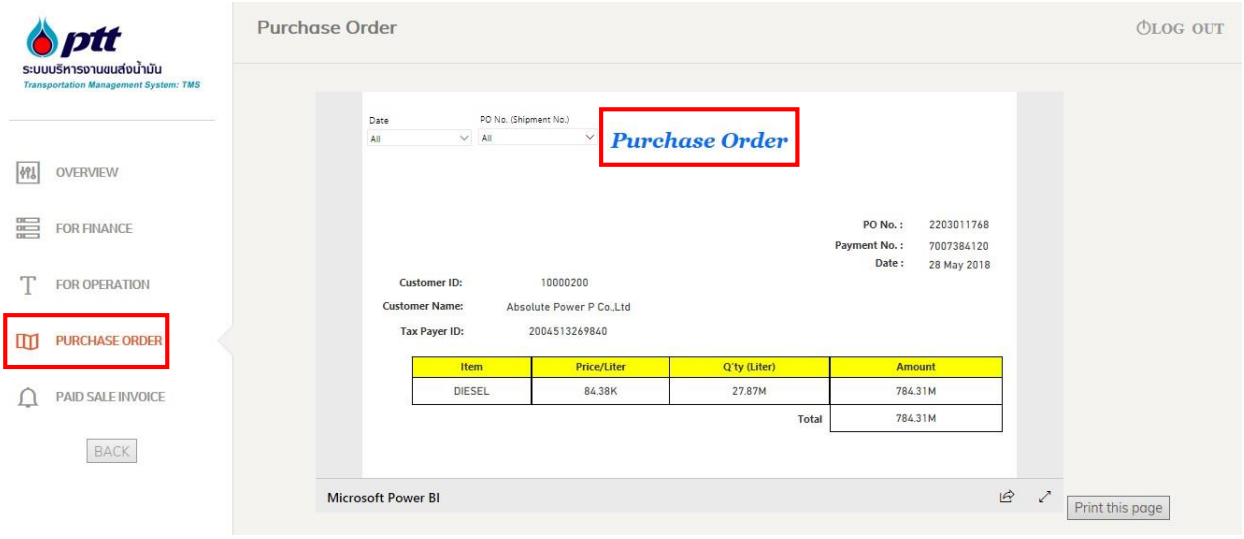


Figure 10.9 Purchase Order in Web page

Select Date and PO NO.(Shipment NO) -> Information will change according to the one that we select

Figure 10.10 Printing page of Purchase Order

When manager want to print out the information, we can press Print this page button to print the information out

- Paid Sale Invoice

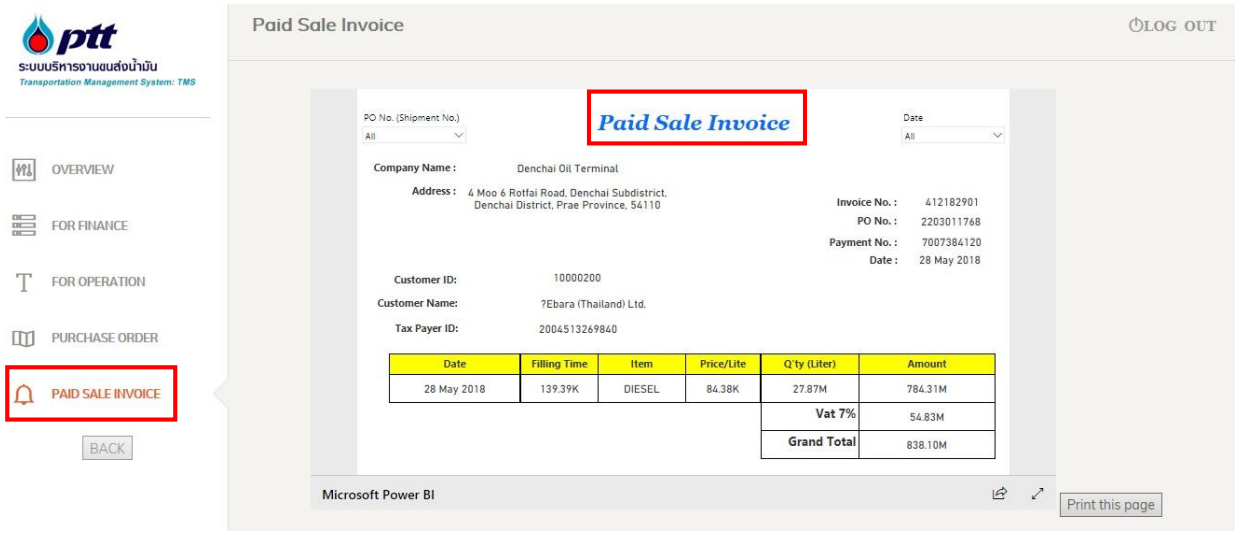


Figure 10.11 Paid Sale Invoice in Web page

PO NO.(Purchase Order) and Select Date -> Information will change according to the one that we select

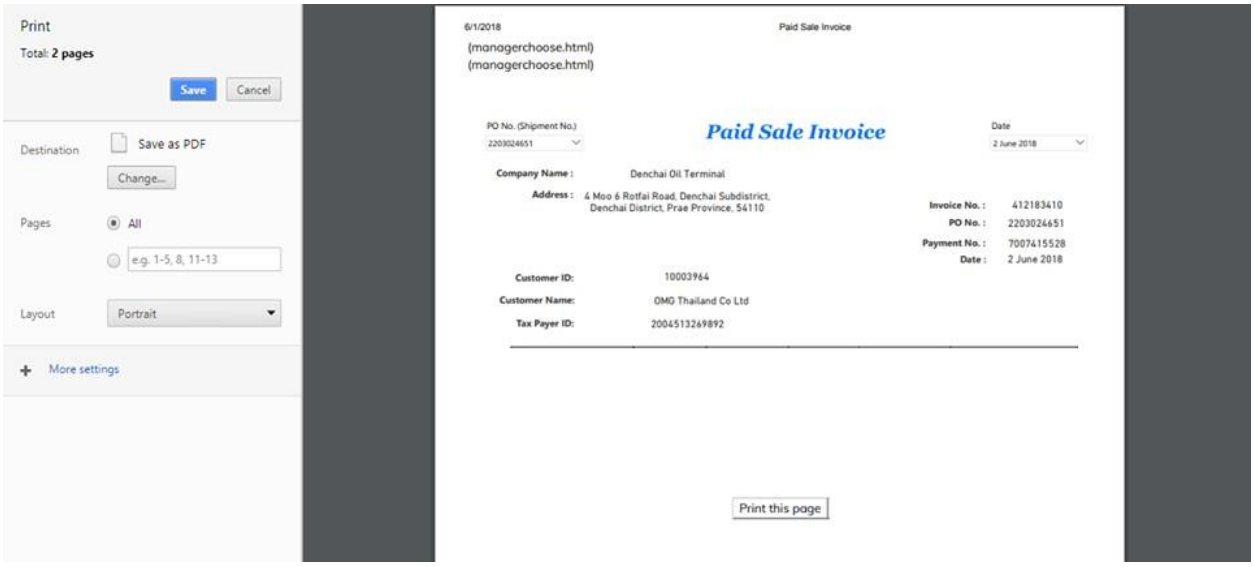


Figure 10.12 Printing page of Paid Sale Invoice

When manager want to print out the information, we can press Print this page button to print the information out

5 Tracking Time

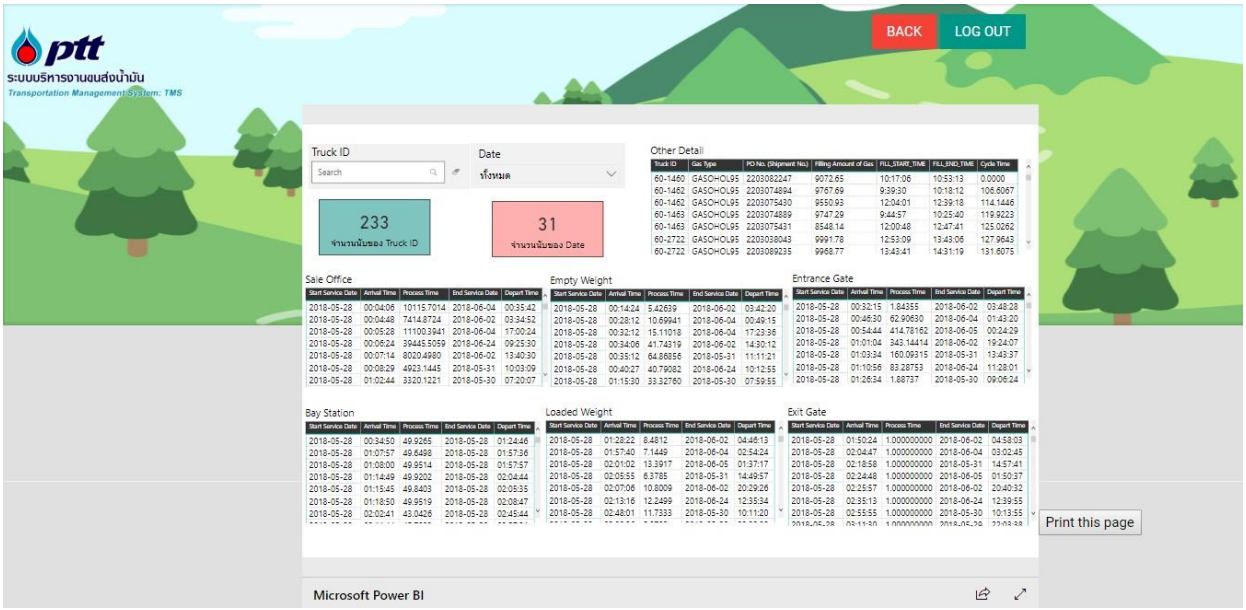


Figure 10.13 Search in Web page

Operator's Part

1 If you choose to log in as operator, you have to enter Username: operator Password: inc

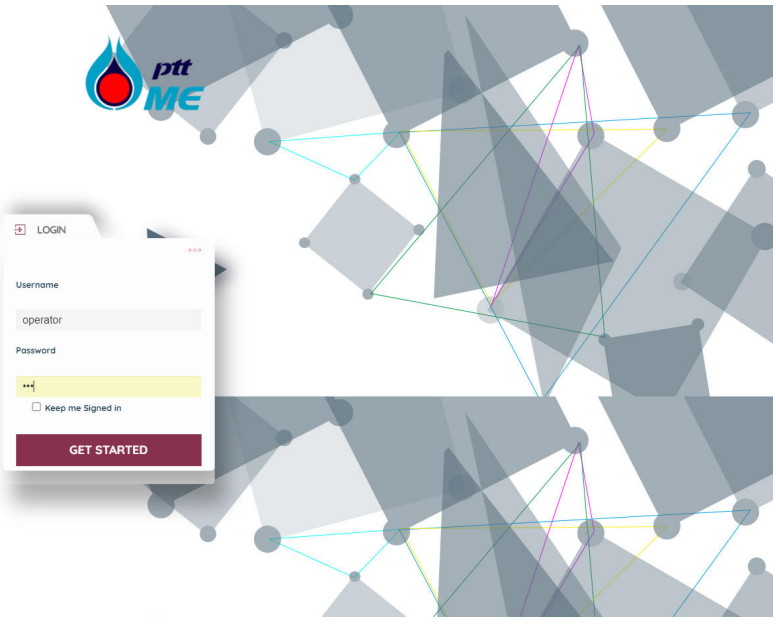


Figure 10.14 Log in page for operator

2 Once an Operator log in, there are 2 options

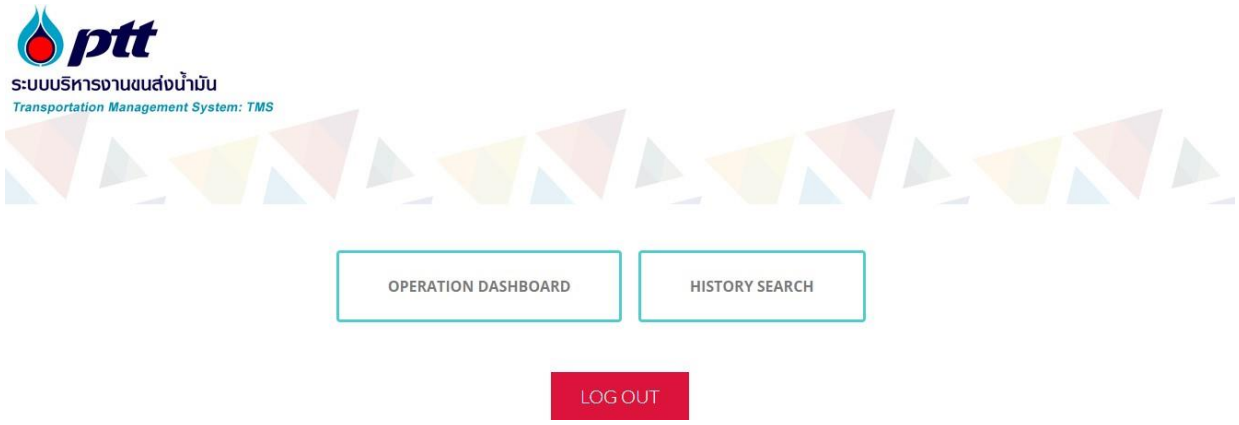


Figure 10.15 Operator Log in

- Operation Dashboard
- Tracking Time

3 Operator Dashboard (Daily)

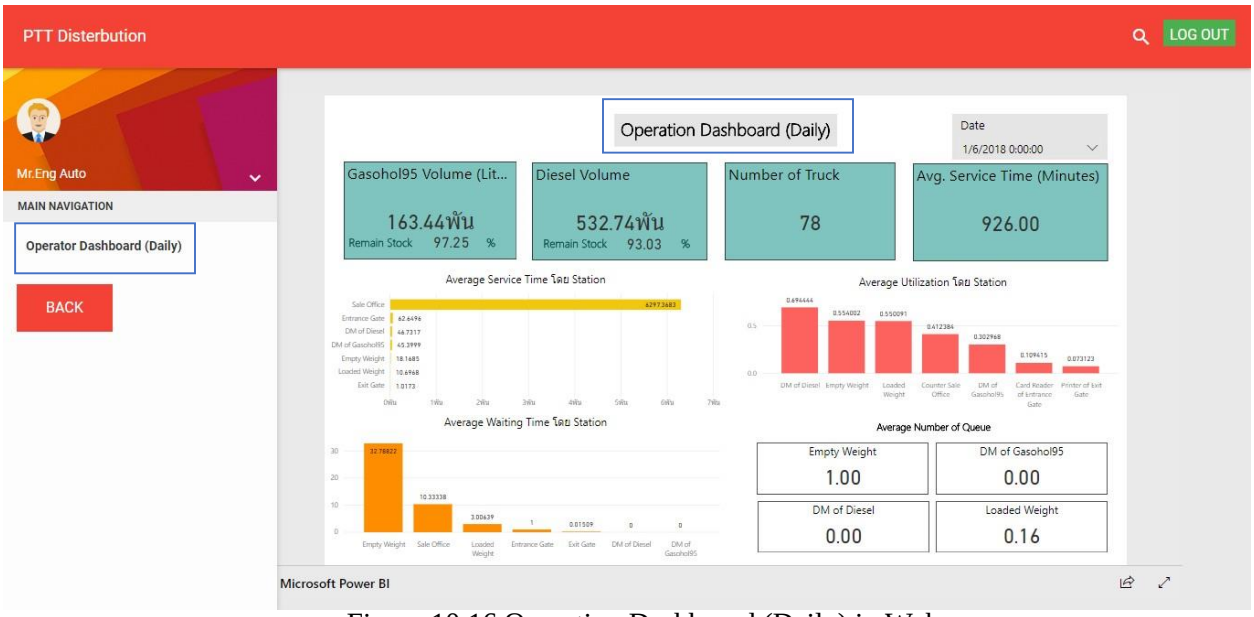


Figure 10.16 Operation Dashboard (Daily) in Web page

4 History Search

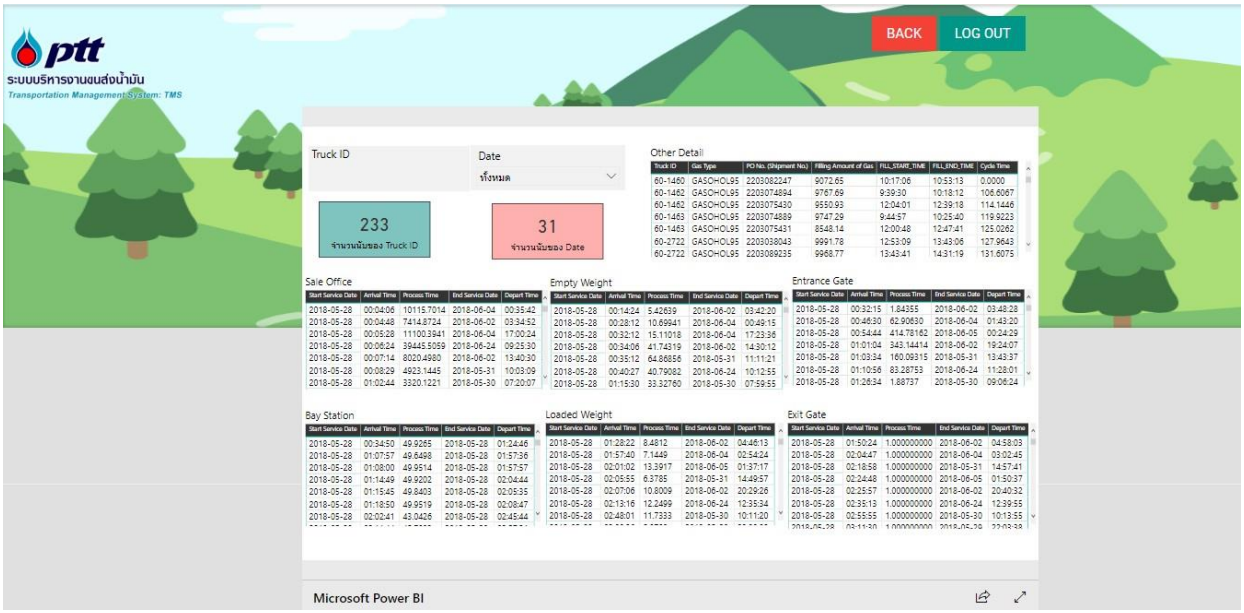


Figure 10.17 History Search in Web page