



DOT ANALYSER USER GUIDE

July 2018

DOT ANALYSER – USER GUIDE

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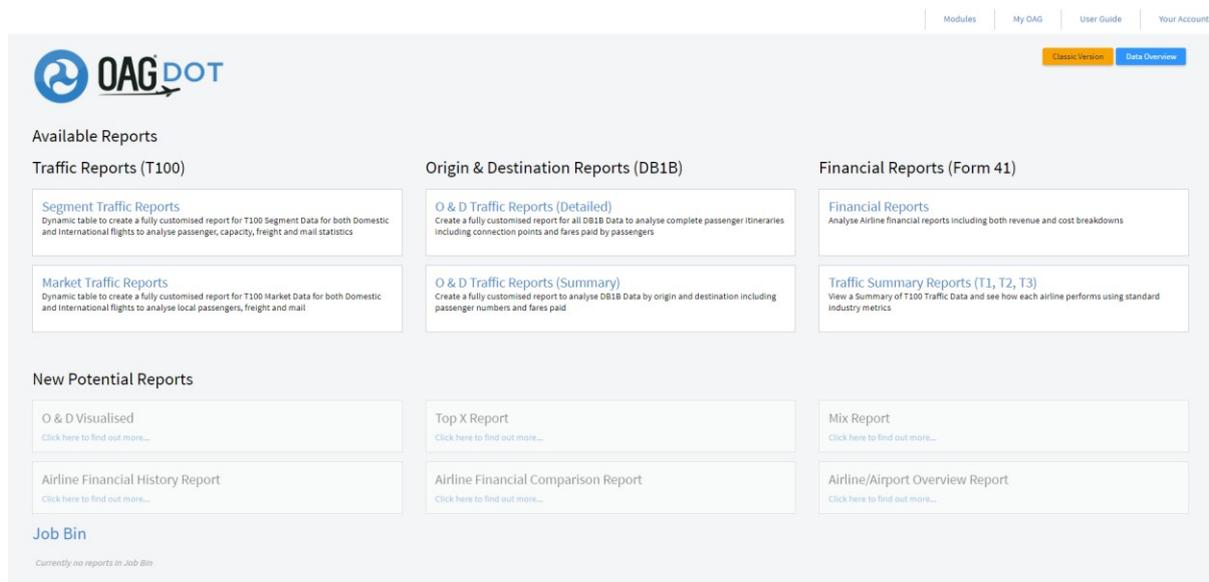
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1 INTRODUCTION

1.1 About the Tool

The US Department of Transport (DOT) gathers valuable data on the US aviation market which is made available as three reports known as T100, Form 41 and DB1B O&D Traffic. To make it easier to extract market insights, and to manipulate data, OAG has created DOT Analyser which takes the hassle out of working with the data, so you can extract the business intelligence you need faster and more easily.

As the leading provider of business intelligence data for the aviation industry, OAG's DOT Analyser is the best, most flexible web-based tool available to navigate these key US DOT aviation datasets. DOT Analyser combines data from the T100, Form 41 and DB1B O&D Traffic reports so they are accessed via a single dashboard, and have a similar look and feel, enabling better and faster decision making. Whether you need to analyse airline trends in depth or need specific data about the financial performance of a carrier, DOT Analyser allows you to do it all with ease.



OAG DOT Analyser sits within the OAG Analyser Suite of products. Each product has been designed to have a high degree of commonality so that screens are visually comparable, and users of one will find it easy to use the other products and create outputs in similar and comparable formats where needed.

1.2 Key Features

- DOT Analyser allows you to access the latest data from each source and look back at historical trends - as far back as 1996.
- Fast and flexible with the highest level of interactivity – all the reports are available as power tables, meaning data can be extracted in the format required by the user.
- DOT Analyser allows you to create, save and schedule regular reports so that they are produced automatically, and sent to your email address for when you need them.
- Easy and intuitive to use – OAG offers a purpose designed tool that allows you to extract just the data you need and takes you straight to the analysis without the hard work of processing the data.
- Sits within OAG Analyser platform and so can be provided as an additional module in a dashboard, making the OAG Analyser suite of products your first and only port of call for air transport analysis.

1.3 The Reports

There are six sets of reports available in DOT Analyser which provide traffic and financial data for airlines flying to and from US airports. The data can be used to analyse both operational and financial trends as a measure of an airline or airport's performance.

All airlines that operate flights within, to or from the USA are required to report their traffic and financial performance to the Department of Transport (DOT). Including;

- Major & National Airlines
- Regional Airlines (required as of October 2002)
- Foreign Flag Airlines (required as of July 1990)
- Cargo Airlines
- Charter Airlines

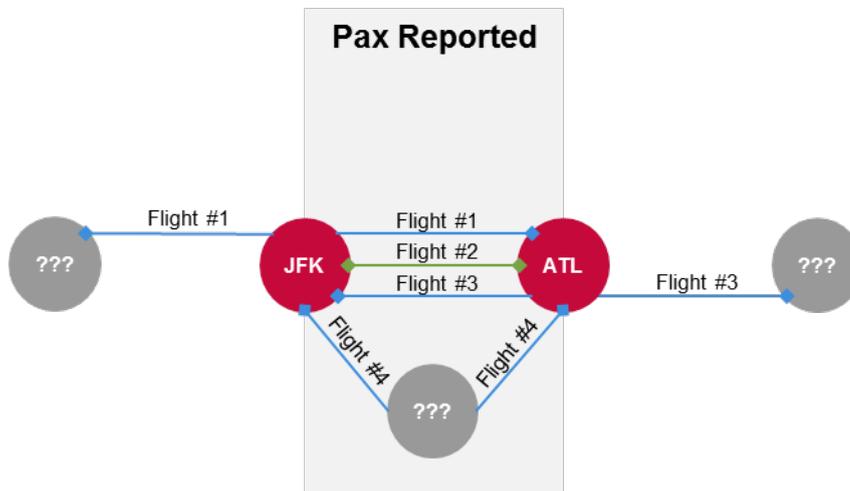
The DOT obtains the performance information via three data collections referred to as T100, DB1B and Form 41. OAG's DOT Analyser has created six power tables, two for each set of data, which make accessing and understanding the data straightforward.

1.3.1 Traffic Reports (T100)

- Recent and historical on-board passenger and cargo traffic data to, from and within the U.S.
- Includes flown passenger data and load factors for single plane flights.
- Contains traffic schedules by carrier, class and aircraft type – passengers and cargo carried, flight frequencies, seat and cargo capacity, origin and destination.
- Covers all US carrier data for US domestic segment and US domestic market (all carriers)
- Covers all carrier data for US international segment and US international market (all carriers)

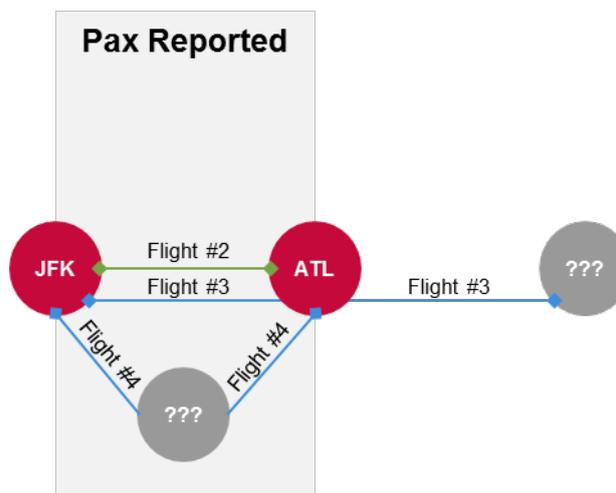
Data reported monthly domestic flights reported with 3-month delay, international with 6-month delay.

T100 Segment data is total number of departing passengers on-board flights (whether those passengers are non-stop, stopping or connecting). T100 does not show a connecting passenger's ultimate origin or destination. T100 Segment data is flown data.



This diagram illustrates the data included in T100 Segment. Looking at an example, JFK to ATL, you can see T100 Segment data includes all passengers flying on this route including those who are stopping and connecting in JFK and ATL.

T100 Market data is total number of departing passengers on-board a flight minus those passengers on stopping flights who are not on the first segment of that flight. (whether those passengers are non-stop, first segment of a stopping flight or connecting). Again T100 Market data is flown data.



This diagram illustrates the data included in T100 Market. Looking again at the example JFK to ATL you can see compared to Segment diagram Flight #1 has disappeared in Market data. T100 Market is local data, it is where a flight number starts hence it does not include stopping flights that have originated at another airport. T100 data is flight number driven.

1.3.2 Origin & Destination Reports (DB1B)

The DB1B data collection refers to data collected after 1998 which the data collected prior to 1998 is called DB1A.

- DB1B is a **10% Sample** of an airline's tickets, then 'adjusted' to estimate 100% of the market by multiplying the data by a factor of 10.
- Based on airline tickets, the data provides an estimate for total passengers and cargo transported by itinerary. The source data therefore includes the origin, destination, connecting points and US gateway for each itinerary, as well as the distance travelled.
- Analysis can be undertaken by operating, marketing and ticketing carrier.
- The data is a rich source of pricing information and includes average fares by itinerary and fare codes by segment. This means that data for Revenue Passenger Miles and Revenue Ton Miles is available.
- DB1B does **not include** aircraft data
- Data is reported **Quarterly**.
- Non-US carriers do not have to report this data to the DOT and therefore **access is restricted for non-US carriers** to prevent them seeing the International data for their US airline competitors.

There are two sets of reports which use DB1B data. These are the **O&D Traffic Reports (Detailed)** and **O&D Traffic Reports (Summary)**.

1.3.3 Financial Reports (Form 41)

The Form 41 data collection provides airline financial (Balance Sheet, Profit & Loss) data for US carriers. Reporting requirements are split into a number of separate 'schedules' or forms which are submitted:

Large Airlines with revenues >\$20m

- B1 - Balance Sheet
- P1.2 - Profit and Loss
- P5.1 - Aircraft Operating Expenses (Carriers with Op. Rev <\$100M)
- P5.2 - Aircraft Operating Expenses (Carriers with Op. Rev >\$100M)
- P6 - Operating Expenses (Carriers with Op. Rev. > \$20m)
- P7 - Operating Expenses (Carriers with Op. Rev > \$1Bn)
- P10 - Detailed Monthly Employee Stats
- P1(a) - Annual Employee Totals
- P12(a) – Fuel

Small/Medium Airlines with revenues <\$20m

- B1.1 - Balance sheet
- P1.1 - Profit and Loss
- P5.1 - Aircraft Operating Expenses (Carriers with Op. Rev <\$20M)
- P1(a) - Annual Employee Totals

DOT Analyser **Financial Reports** allow the user to quickly and easily extract data about financial performance for airlines.

- Full airline financial history - financial information includes balance sheets, income statements, employee counts and traffic schedules.
- Revenues from Tickets and Ancillaries.
- Costs such as Staff, Aircraft, Fuel, Marketing.

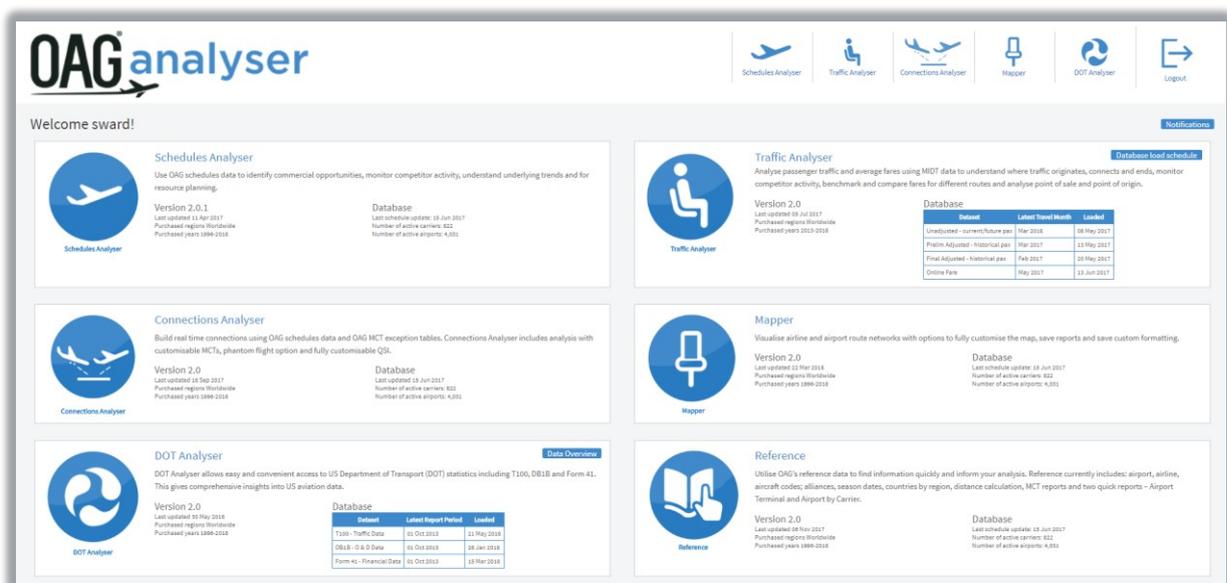
In addition, the Financial Reports (Form 41) include **Traffic Summary Reports** which are derived from T100 data but aggregated to the point where sensitivities about data disclosure are removed. They provide a high-level view of airline (T1), aircraft (T2) and airport (T3) performance.

- Reported monthly - Domestic flights reported 3 months delayed and International flights reported 6 months delayed

2 GETTING STARTED

This guide provides all the information you need to start using OAG DOT Analyser. It has been designed to walk you through all of the steps involved with getting the data you need from DOT Analyser and can be used on its own, or in conjunction with the **User Guide Videos** which are accessible from the toolbar within DOT Analyser. You can also find a **Glossary of Terms** and **Frequently Asked Questions** there.

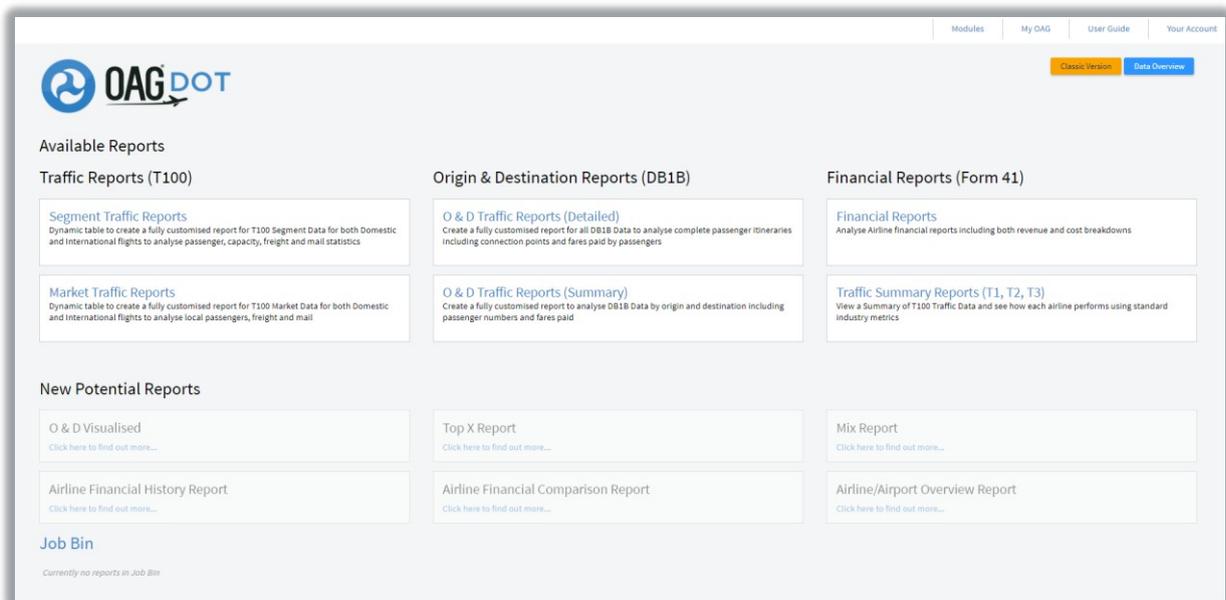
If you have any login or account issues please contact ContactUs@oag.com. If you would like to give feedback on your experience of using DOT Analyser or if you have any problems using this tool please contact your account manager or our support team Analyser-Support@oag.com and they will be able to help you or pass you on to the relevant department to help. When you log into OAG Analyser you will see a screen like this which is the dashboard for the OAG Analyser suite of products.



Each of the products you have a subscription to can be accessed via the relevant box in the centre of the screen, or via the icons in the top right of the screen, and your unique subscription number is shown in the top left corner

To open DOT Analyser, click on **Open DOT Analyser** under the DOT Analyser icon.

On logging into **DOT Analyser**, you will see this screen which is the landing page:



The look and feel of this home screen is similar to the other OAG Analyser modules. There are six reports available, under three headings of Traffic Reports (T100), Origin & Destination Reports (DB1B) and Financial reports (Form 41).

Below these reports are some ideas for new reports. Please click on these and use the questions presented to provide OAG with feedback about what would be useful in future reports for DOT Analyser.

Underneath the area for **New Potential Reports**, you can access the **Job Bin**, **Saved Reports** and **Scheduled Reports**.

There are 3 main sections in DOT Analyser. This User Guide describes how they work here and provide you with a worked example of each report in this section. You can also access short video guides from our **User Guide** that replicate the content provided here. From the home screen you can click on any of the report names and this will take you to a query screen where you can create a report tailored to your requirements.

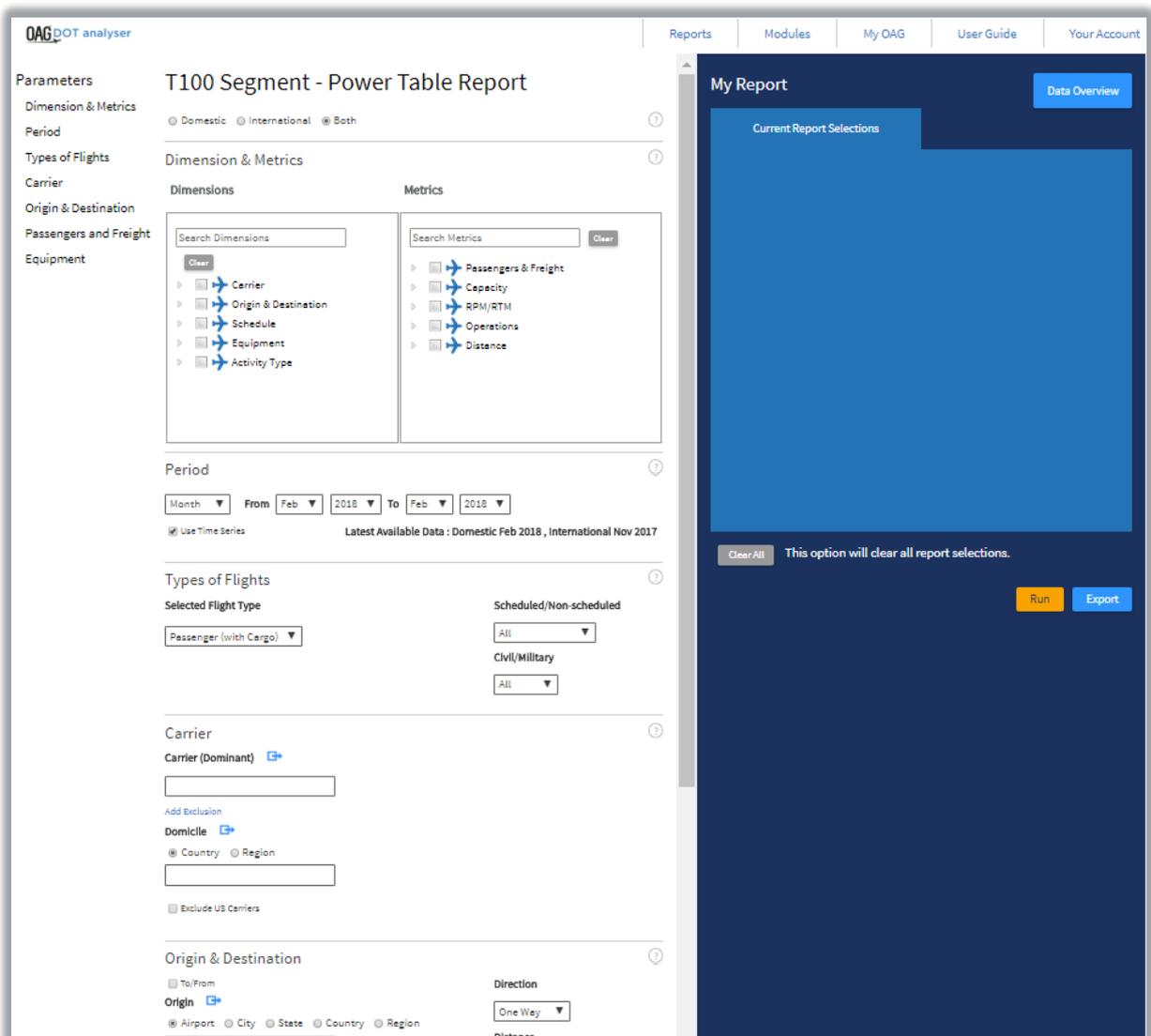
3 T100 SEGMENT TRAFFIC REPORTS

3.1 USING THE T100 SEGMENT TRAFFIC POWERTABLE

3.1.1 T100 Segment Traffic Home Screen

The T100 **Segment Traffic Reports** provide insight into the capacity and traffic trends at an airport or on a flight. Segment data covers all traffic on a flight, and does not take account of where passengers or freight originated from or is destined for, but simply what is being carried between the two airports for a flight.

To start using the T100 **Segment Traffic Reports** click on **Segment Traffic Reports** on the home screen. You should click through to a screen which appears like this.

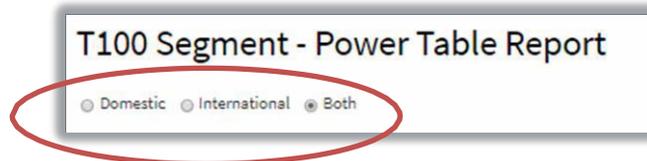


If you already use the other OAG Analyser modules this will be familiar to you. It is a power table in which you create the report you need using the various **Dimensions**, **Metrics** and **Parameters** available to you.

The central area of the screen is where you select these, and the area to the right summarises your **Current Report Selections**. On the left is a list of short cuts to the various types of parameters available to you.

3.1.2 Domestic vs International Data

The US Department of Transport requires airlines to report data for all domestic and international flights. At the top of the screen you can choose whether you need data from the Domestic data, the International data, or both.



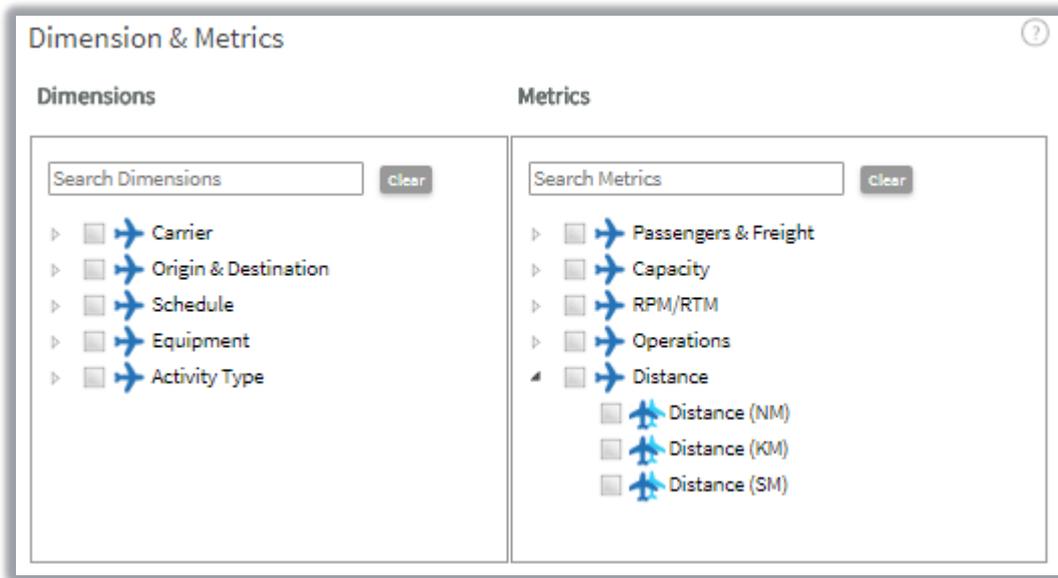
At the top right of the screen, there is a **Data Overview** box. Clicking on that opens a pop up which shows what data is included in each T100 report, and what the latest report period is.

Table Name	Description	Latest Report Period
T100 Domestic Segment	This table contains domestic non-stop segment data reported by both U.S. and foreign air carriers.	Feb 2018
T100 International Segment	This table contains international non-stop segment data reported by both U.S. and foreign air carriers.	Nov 2017
T100 Domestic Market	This table contains domestic market data reported by both U.S. and foreign air carriers.	Feb 2018
T100 International Market	This table contains international market data reported by both U.S. and foreign air carriers.	Nov 2017

OK

3.1.3 Dimensions & Metrics

The Dimensions and Metrics define the rows and columns of your data, and you can select as many as you need from the options provided. With each selection you make, the **Current Report Selections** adds the selection to the blue area on the right.

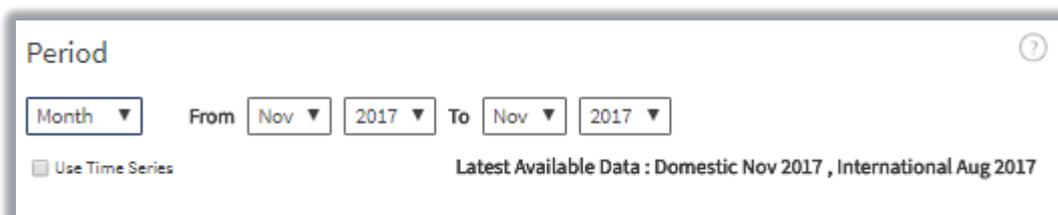


Each of the Dimensions and Metrics are grouped into categories and clicking on the arrow to the left of each opens up a list of options associated with that category. A full list of the options is available in the **APPENDIX**.

3.1.4 Choosing the Period

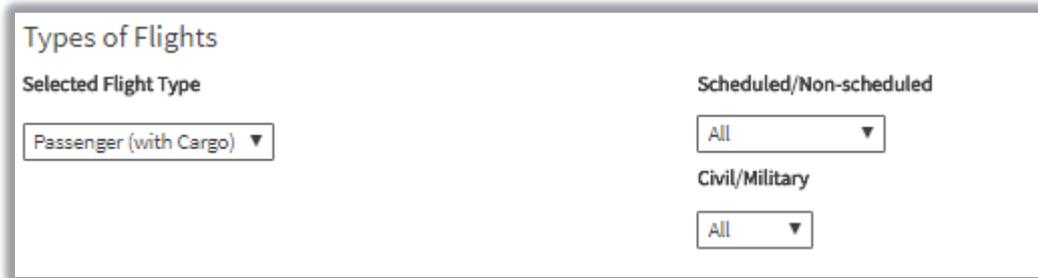
For each report you must select a time period for which you want to extract data. If you leave this blank, then the report defaults to all the data contained in DOT Analyser. There are options to see data by month, quarter or year and in time series or aggregated into a single number for the time period selected.

There is a time lag between flights taking place and when the DOT makes data available, but you can see the most recent data available listed below the data options. A full list of the most recent data available for each of the DOT Analyser reports is available in the **Data Overview**, located at the top right of the **Current Report Selections** area of the screen.



3.1.5 Types of Flights

There are three types of flight – Passengers (with Cargo), Cargo only or both. This area of the screen also provides options to select scheduled or non-scheduled flights and civil or military flights. The default option is for both which is the All option.



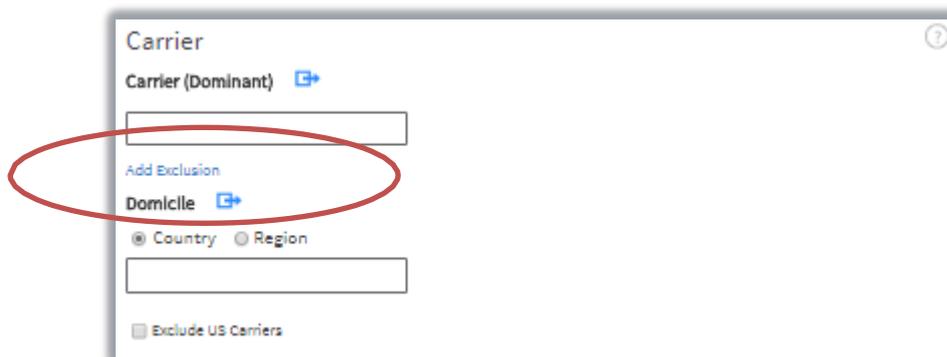
The screenshot shows a configuration panel titled "Types of Flights". It contains three dropdown menus: "Selected Flight Type" set to "Passenger (with Cargo)", "Scheduled/Non-scheduled" set to "All", and "Civil/Military" set to "All".

3.1.6 Carrier Selection

If you choose not to select a carrier here, data for all carriers will be included in your report. If you have not chosen Carrier as a Dimension, then the data will be aggregated for all airlines. Specifying the Carrier as a Dimension will create a report with data by Carrier.

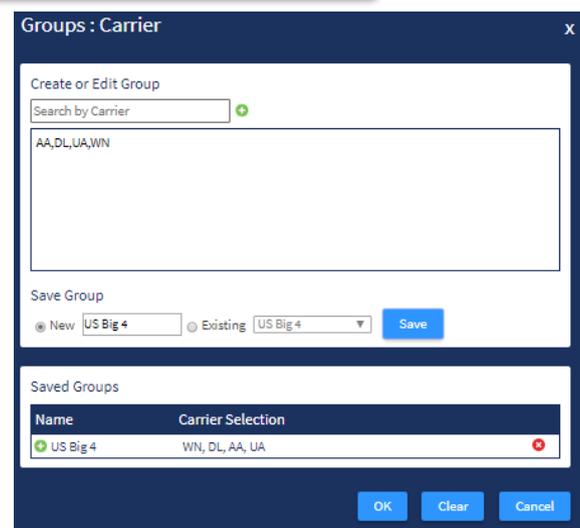
If you want to specify a carrier, or group of carriers, there are two ways of inputting carrier names – either by 2 letter code separated by a comma i.e. AA, BA, WN, etc., or by typing in the carrier’s name which will produce a drop-down list to select from.

If you want to exclude a particular carrier, or group of carriers, you can do so. Click on **Add Exclusion** below the carrier box and, as before, select a single carrier, or group of carriers, in the exclude field by using their two letter code, or name.



The screenshot shows the "Carrier" configuration panel. The "Carrier (Dominant)" field is empty. Below it, the "Add Exclusion" link is circled in red. The "Domicile" field is also empty, with radio buttons for "Country" and "Region". There is also an "Exclude US Carriers" checkbox.

Another way to choose a group of carriers is by clicking on the **link** logo at the end of the field. This opens up a new box as pictured to the right. If you want to run reports for the same group of airlines many times you can create a group and name it so that it is available to use in future. Firstly, type in the airline two letter codes or names in the **Search by Carrier** field. Select each one as the name appears once you start typing



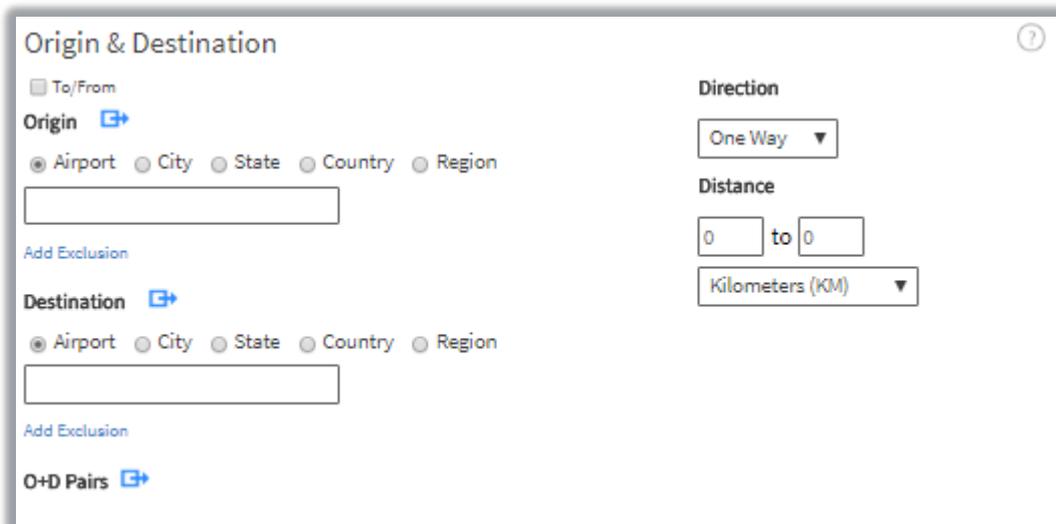
The screenshot shows a dialog box titled "Groups : Carrier". It has a "Search by Carrier" field containing "AA,DL,UA,WN". Below the search field is a list of "Saved Groups" with one entry: "US Big 4" with the carrier codes "WN, DL, AA, UA". The dialog has "OK", "Clear", and "Cancel" buttons at the bottom.

and click on the green + sign to add it to the list of carriers in the group you are creating. When you have selected all the carriers you want, type in a name for the group in the **Save Group** field, and then click on **Save**. In this example the group created is called **US Big 4** and contains the four largest American airlines.

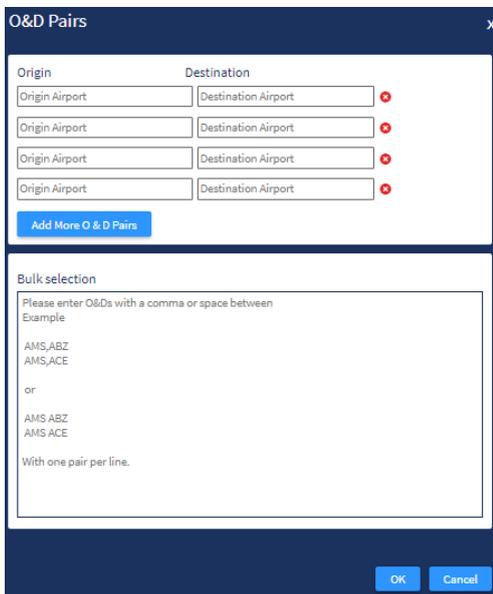
In the Carrier set of parameters, you can also choose the **Domicile Country** or **Region** for all carriers you want to see in your report.

3.1.7 Origin & Destination

As before, if you leave the Origin and Destination fields blank, data for all origins and destinations will be included. When you select an origin and a destination you are choosing to look at all the data **from** the origin to the destination.



Sometimes you might just want to look at all data **to and from** one specific airport, city, country or region. Clicking on **To/From** allows you to do this and you can look at everything from an origin point.



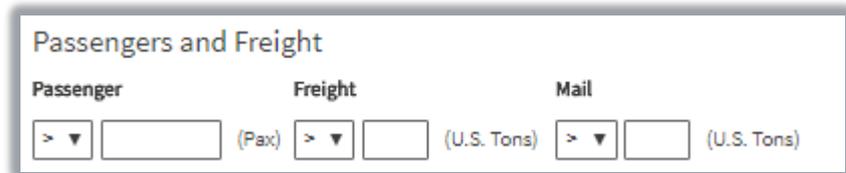
At the bottom of the query screen on the left, there is an option to choose specific **O&D Pairs**. When you click on it, it opens up the dialogue box shown on the left here.

You can use this box to enter specific O&D Pairs, or you can use the **bulk origin destination** pairs field which lets you paste in a selection of origin and destination codes from another source.

In the Origin and Destination field you can also choose to restrict the data you see to just one way, two way, or aggregate data for both directions by selecting your preferred option from the drop down under Direction. The distance of a flight can also be used as a filter, either from 0 to a maximum distance, or within a certain range.

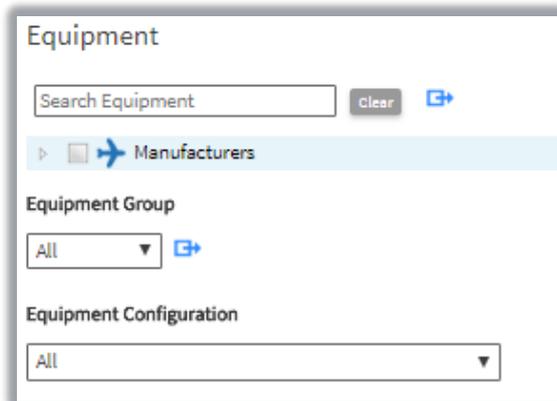
3.1.8 Passengers and Freight

As airlines are required to report all flights to the DOT, there will be data included for unusual flights such as flights to a maintenance base. This



area of the query screen allows you to specific minimum or maximum numbers of passengers or tons of freight to qualify for inclusion in your report and is useful if you need to exclude these anomalous flights.

3.1.9 Equipment



The final parameter which can be used to define your report is **Equipment**. This allows you to select flights which used specific aircraft types. The blue **Link** options allow groups of multiple equipment types to be included.

3.1.10 Running a Report

Once all the **Dimensions**, **Metrics** and **Parameters** have been selected, you are ready to run the report by clicking **Run**, on the left. You can also use the **Export** option but it is often helpful to run the report first, check that it provides the data you needed and expected, and then export the data for more detailed interrogation of the data after that.

3.2 T100 SEGMENT TRAFFIC REPORT - WORKED EXAMPLE

We'll work through an example now to demonstrate what outputs this report can provide. In this example we will look at what has happened to air travel once air services were resumed between the United States and Cuba. We want to see what capacity is being provided on flights between the two countries since January 2016, and how it has changed since then.

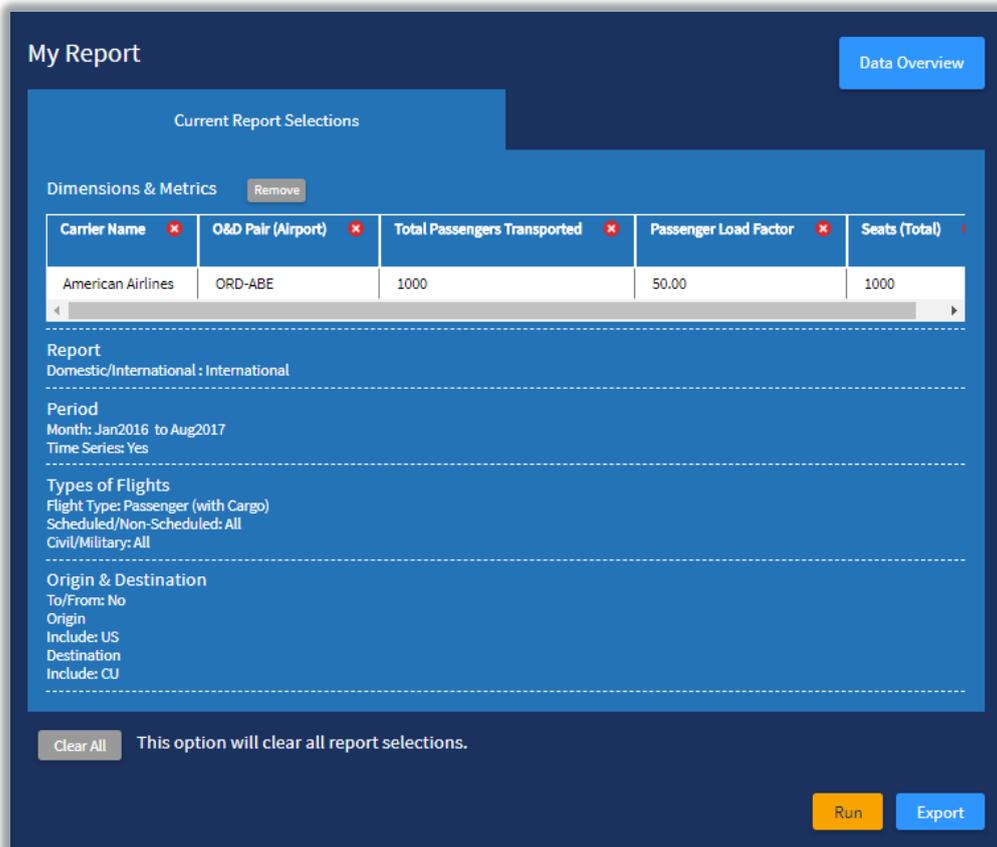
We'll select carrier name and O&D (Airport Pair) as dimensions, and then under metrics we'll choose total passengers transported, passenger load factor and seats.

We'll choose month as the period and select January 2016 as the starting point and then August 2017 as the end point.

Scrolling down in the main section, we don't want to add any carriers as we want to see the whole market, so will leave that blank.

We do want to add the origin and destination data to limit the data to just US-Cuba. In Origin we click on country and enter US, and then in Destination we do the same and enter Cuba.

It's that simple. Once we've done that, we can check what appears in the **My Report** section on the right



My Report Data Overview

Current Report Selections

Dimensions & Metrics Remove

Carrier Name	O&D Pair (Airport)	Total Passengers Transported	Passenger Load Factor	Seats (Total)
American Airlines	ORD-ABE	1000	50.00	1000

Report
Domestic/International : International

Period
Month: Jan2016 to Aug2017
Time Series: Yes

Types of Flights
Flight Type: Passenger (with Cargo)
Scheduled/Non-Scheduled: All
Civil/Military: All

Origin & Destination
To/From: No
Origin
Include: US
Destination
Include: CU

Clear All This option will clear all report selections.

Run Export

The data shown in **My Report** at this stage is 'dummy data' and is illustrative of the data that the report will produce.

You could export the report straight from this page but it's always worth running it to check that the data you are expecting is what is generated by the report. This is how the results appear.

T100 Segment - Power Table Report

Showing 1 - 10 Of 834 Results Number Of Rows Per Page: 10 Filter Results

Carrier Name	O&D Pair (Airport)	Total Passengers Transported	Passenger Load Factor	Seats (Total)	TimeSeries
Alaska Airlines Inc.	LAX-HAV	2,919	57.60	5,068	201702
Alaska Airlines Inc.	LAX-HAV	4,296	77.39	5,551	201707
Alaska Airlines Inc.	LAX-HAV	3,142	56.66	5,545	201708
American Airlines Inc.	CLT-HAV	2,403	60.56	3,968	201612
American Airlines Inc.	CLT-HAV	1,500	41.85	3,584	201702
American Airlines Inc.	CLT-HAV	3,172	79.94	3,968	201707
American Airlines Inc.	CLT-HAV	2,066	52.07	3,968	201708
American Airlines Inc.	LAX-HAV	211	32.97	640	201605
American Airlines Inc.	MIA-CFG	930	64.58	1,440	201607
American Airlines Inc.	MIA-CFG	555	38.54	1,440	201608

834 result(s) found, displaying result(s) from 1 to 10. Page 1 / 84

From here you can choose to export the report to carry out your own analysis, or schedule it to run again in future or save it if you know you want to look at it or run it again.

Clicking on **Export** opens the box on the left and you can name the report and choose what type of format you want to export the data in.

Export

Report Name

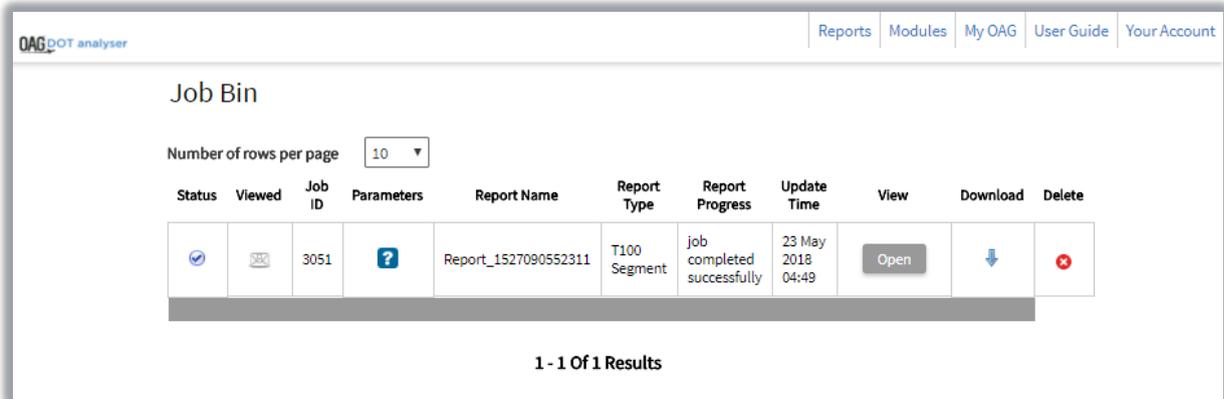
File Type
 CSV PDF XLS XLSX

Note: The CSV format file is limited to approximately 512Mb.

Once you've done this, another window appears prompting you to either continue or go to the **Job Bin**. Continuing lets you amend this query or close it and run another one.

Export

The **Job Bin** is where all reports are sent to be processed and you can access it either from here, or from the DOT Analyser home page, or the menu bar on the top right of the screen. This is what it looks like:



From the **Job Bin**, you have the option to either view the report, which will take you back to the original query screen, download it, or delete it. When you download it and open the file in Excel, there are two tabs. One, as pictured below is a summary of the **Search Criteria**, and the other is the **Data Export**.

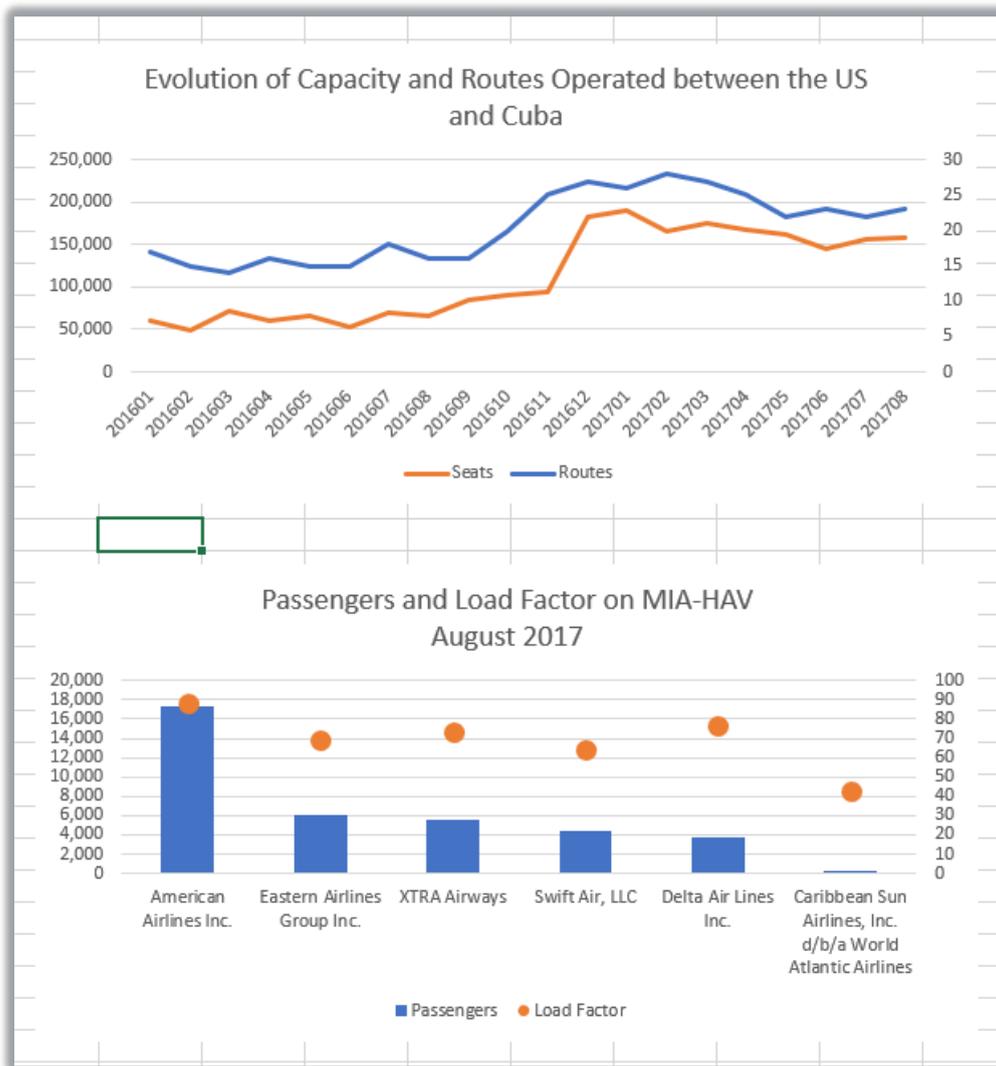
SEARCH ATTRIBUTES/PARAMETERS:	
Report type:	T100 - Segment
Dimensions:	Carrier Name,O&D Pair (Airport)
Metrics:	Total Passengers Transported,Passenger Load Factor,Seats (Total)
Period:	Month 01Jan2016 to 31Aug2017
Time Series:	Active
International / Domestic / Both:	International
Types of Flight:	
Selected Flight Type:	Passenger (with cargo)
Schedule Type:	All
Civil/Military:	All
Operating Carriers:	
Included Carriers:	
Excluded Carriers:	
Domicile:	N/A
Exclude US Carriers:	No
Origin and Destination:	
Toggle To/From:	No
Origin Included Ports Type:	Country
Origin Included Ports:	US
Origin Excluded Ports Type:	Airport
Origin Excluded Ports:	
Destination Included Ports Type:	Country
Destination Included Ports:	CU
Destination Excluded Ports Type:	Airport
Destination Excluded Ports:	
Agregate Route:	No
O and D Pairs:	
Stage Length:	N/A
Payload:	
Passenger:	= tons
Freight:	= tons
Mail:	= tons
Equipment:	
Equipment Group:	All

Navigation: Search criteria | Data Export | Pivot | Charts

OAG Dot Analyser					
Version: Data load date: 02 May 2018					
Monthly dated at: 5 2018					
Report dated at: May 02-2018. 10:24 BST					
Carrier Na	O&D Pair	Total Pass	Passenger	Seats (Tot	TimeSeries
American	DFW-HAV	84	53	160	201602
American	LAX-HAV	292	46	640	201607
American	MIA-CFG	883	61	1,440	201604
American	MIA-CFG	586	46	1,280	201605
American	MIA-CFG	1,083	27	3,968	201701
American	MIA-CFG	1,293	33	3,968	201703
American	MIA-CMW	449	56	800	201601
American	MIA-HAV	8,311	71	11,675	201606
American	MIA-HAV	17,021	86	19,840	201612
American	MIA-HAV	13,599	76	17,920	201702
American	MIA-HAV	16,531	84	19,680	201707
American	MIA-HAV	17,383	88	19,680	201708
American	MIA-HOG	918	72	1,280	201606
American	MIA-HOG	7,096	72	9,920	201612
American	MIA-HOG	3,247	50	6,464	201702
American	MIA-HOG	3,454	89	3,872	201704
American	MIA-HOG	4,399	90	4,864	201707
American	MIA-SCU	105	22	480	201610
American	MIA-SNU	1,239	35	3,520	201608
American	MIA-SNU	3,785	40	9,440	201610
American	MIA-VRA	3,732	46	8,128	201612
American	MIA-VRA	1,636	27	5,952	201702
American	MIA-VRA	1,950	41	4,768	201704
American	MIA-VRA	3,229	79	4,096	201707
American	TPA-HAV	627	78	800	201601
American	TPA-HAV	563	88	640	201602
American	TPA-HAV	590	92	640	201603

Navigation: Search criteria | Data Export | Pivot | Charts

The **Data Export** is the second tab and simply contains the data we requested. We can then carry out some analysis to see how the US-Cuba market evolved over the time period we selected. We've done some quick analysis displayed below (and shown above as new tabs) that shows how the number of routes operated between Cuba and the US peaked in early 2017, and then declined slightly, with seat capacity following a similar profile. The data we extracted also allows us to show which airline carried most passengers and what their load factor was.



The **User Guide** link from DOT Analyser for this report takes you to our website where there is a short video with a worked example of how to create and extract data using the T100 [Segment Reports](#).

These match up with the worked examples that are used here, so you can use this guide and the videos to complement each other if necessary.

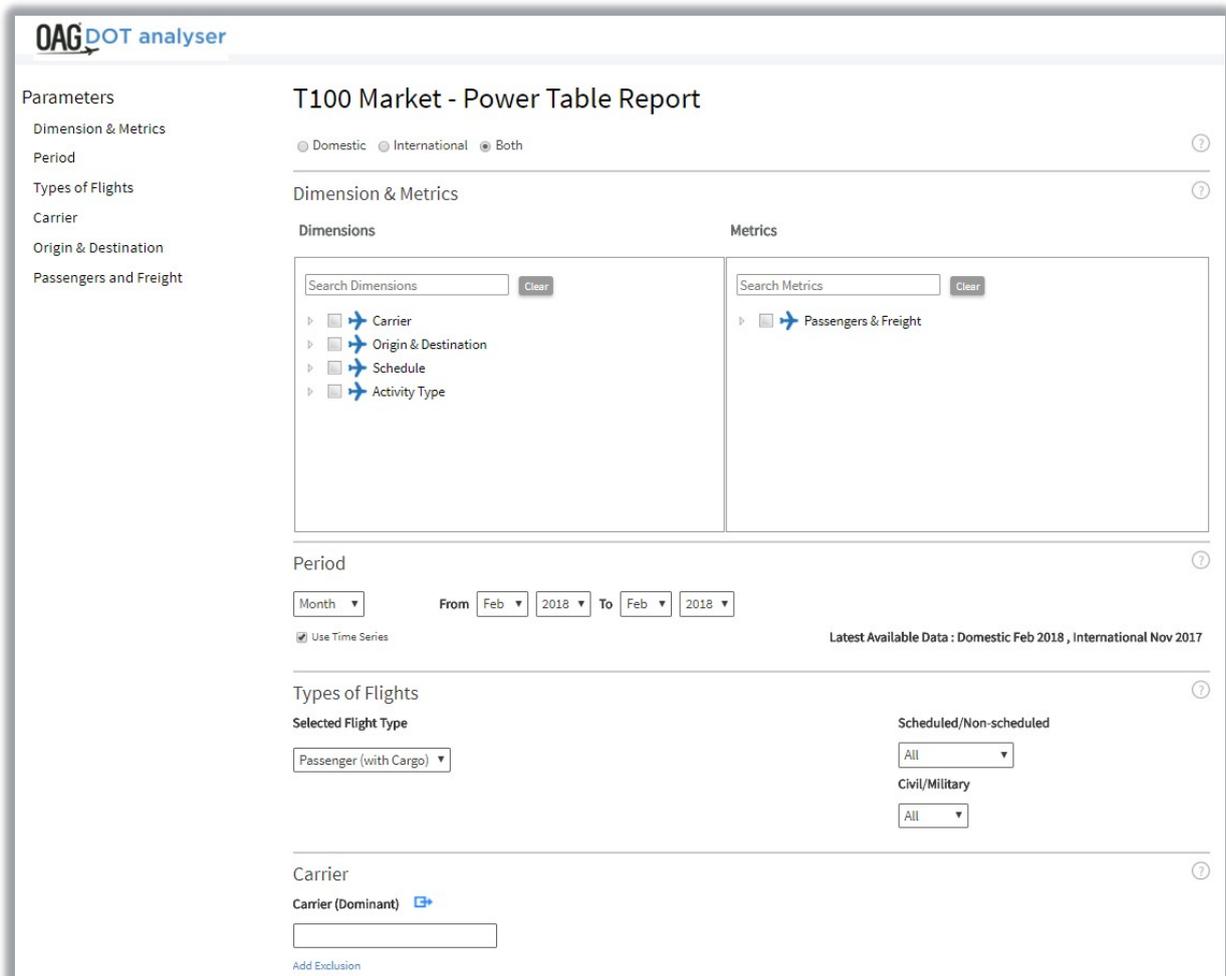
4 T100 MARKET TRAFFIC REPORTS

4.1 USING THE T100 MARKET TRAFFIC POWER TABLE

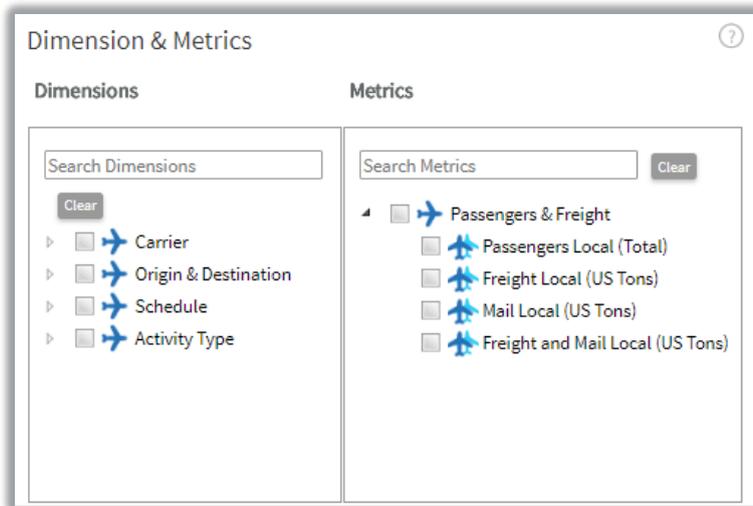
This section considers how to generate reports in the next of the T100 reports, the **Market Traffic Reports**. In this section descriptions of functionality that have been covered above will not be repeated.

T100 Market data is total number of departing passengers on-board a flight minus those passengers on stopping flights who are not on the first segment of that flight (whether those passengers are non-stop, first segment of a stopping flight or connecting).

As before, to start using the T100 **Market Traffic Reports**, click on Market Traffic Reports from the home screen. When you click through the following screen appears.

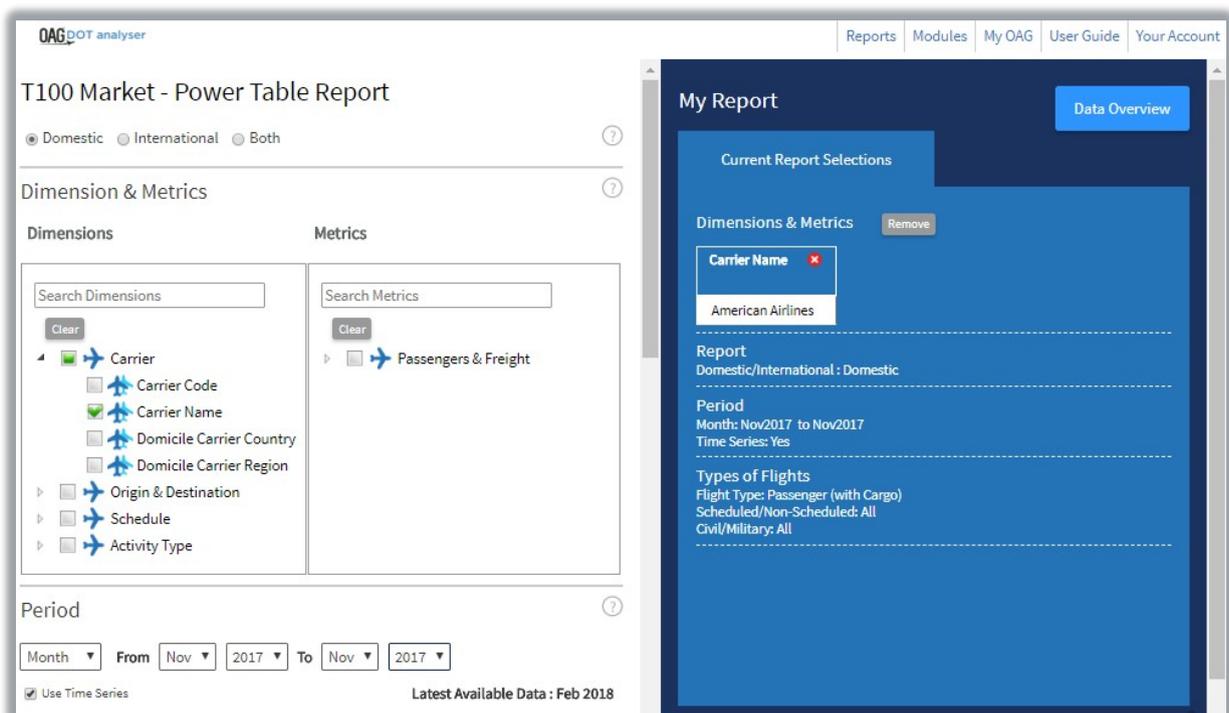


This report is also structured as a power table. There is one less Dimension in this report, as Equipment is not covered, and this time only Passengers and Freight appear in the Metrics options. All of the Dimensions and Metrics for each table are listed in the **APPENDIX** at the end of this document.

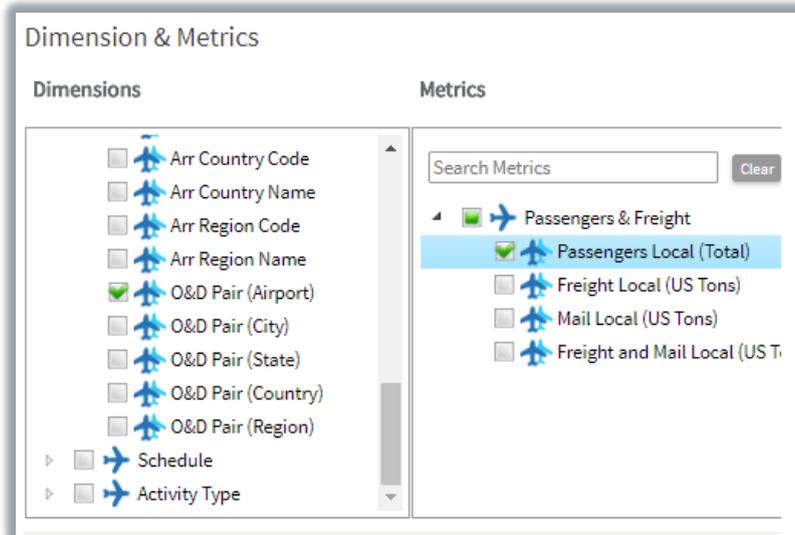


4.2 T100 MARKET TRAFFIC REPORT - WORKED EXAMPLE

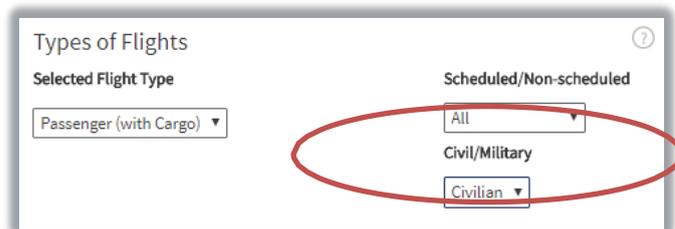
We'll do another worked example to demonstrate the data that this report can provide. This time we'll look at the passenger data by airline and routes between New York and Los Angeles. We'll choose to just look at the Domestic Report, so you can see from the screenshot below we've selected that. We want the results to be displayed by airline name, so we'll click on the arrow next to carrier and then choose carrier name from the options displayed below. For this example, we want to look at data for November 2017, so we select Month (the default) in Period, and then change the date to Nov 2017 in both boxes. You can see that the selections we've made so far appear on the right-hand side.



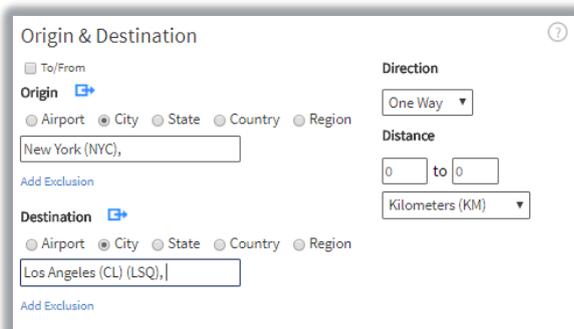
Then we need to select a further dimension to display the routes. We'll open the origin and destination arrow and scroll down the options to O&D Pair (Airport). We'll then add a metric, in this case we want Passengers Local (Total).



In the next section, **Types of Flights**, we're going to filter out military flights, so we'll choose civilian from the drop-down box under civil/military (the default is all).



We don't need to make any other changes to Types of Flights or Carrier, so we'll leave those sections unchanged, but we could have chosen to include cargo flights, or restrict the data to scheduled flights only.



The last step is to select the origin and destination we want to see, in this case the origin is New York and the destination is Los Angeles. We're going to look at these two destinations at a city level, so we click on City under Origin and then start typing New York.

We do the same for Los Angeles and then we're ready to run our query.

Now that we've included everything we need in the query, we can check the Current Report Selections and then click on run.

Here's our data – as before we can export it to carry out some further analysis in Excel, or schedule it to run again next month, or save it for future use.

The screenshot shows the OAG dot analyser interface with a report titled 'T100 Market - Power Table Report'. The report displays a table with 8 rows of data. The table has three columns: 'Carrier Name', 'Passengers Local (Total)', and 'TimeSeries'. The data is as follows:

Carrier Name	Passengers Local (Total)	TimeSeries
American Airlines Inc.	30,959	201711
Delta Air Lines Inc.	47,746	201711
JetBlue Airways	52,411	201711
Southwest Airlines Co.	106	201711
Spirit Air Lines	20	201711
Swift Air, LLC	0	201711
United Air Lines Inc.	63,688	201711
Virgin America	37,404	201711

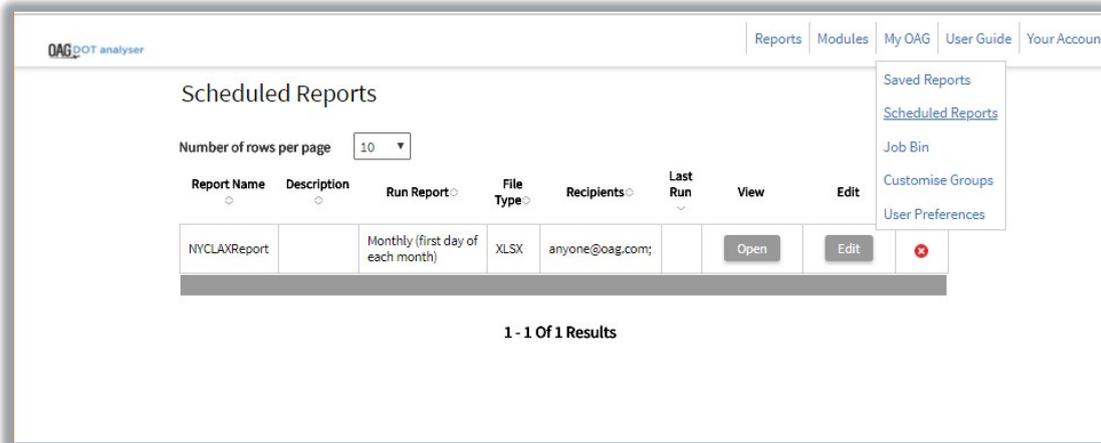
Below the table, it indicates '8 result(s) found, displaying result(s) from 1 to 8. Page 1 / 1'. The interface also includes navigation buttons like 'Back to report fields', 'Export', 'Schedule', and 'Save'.

Clicking on **Schedule** opens up the following box where we can give the report a name and description, indicating how frequently we want it to be run – either monthly or quarterly for this report - whether we want it to be static in terms of the dates, or update as new time periods are added, and then what format we need it in. Finally, we can enter an email address(es) that we want to have the report sent to.

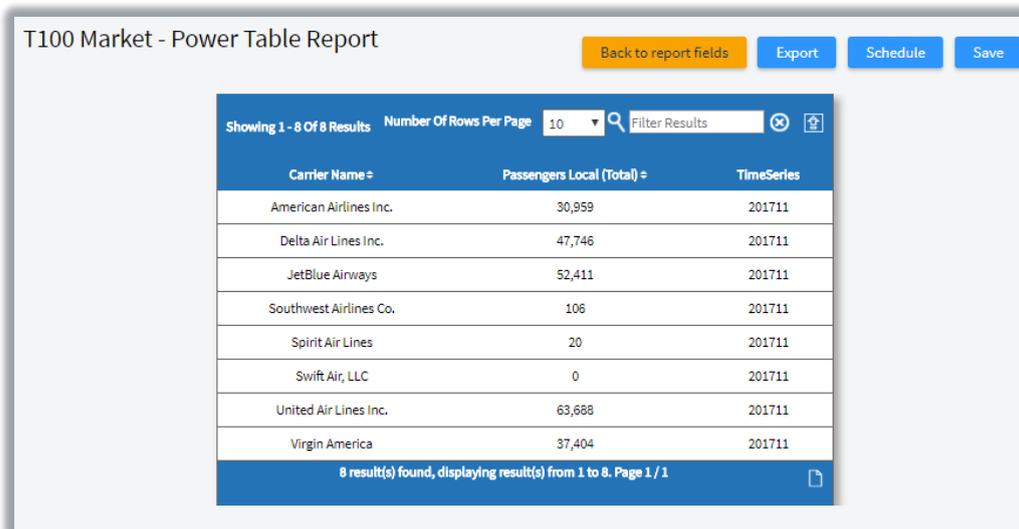
The 'Schedule Report' dialog box is shown with the following fields and options:

- Report Name:** A text input field with a placeholder 'Characters (Max 20) A-Z 0-9'.
- Report Description:** A text area for providing a description.
- Run Report:** A dropdown menu currently set to 'Monthly (first day of each month)'.
- Rolling Dates:** Radio buttons for 'Y' (checked) and 'N'.
- File Type:** Radio buttons for 'CSV' (checked), 'PDF', 'XLS', and 'XLSX'.
- Distribution List:** A text input field containing 'someone@somewhere.com' and a green plus icon to add more addresses.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom.

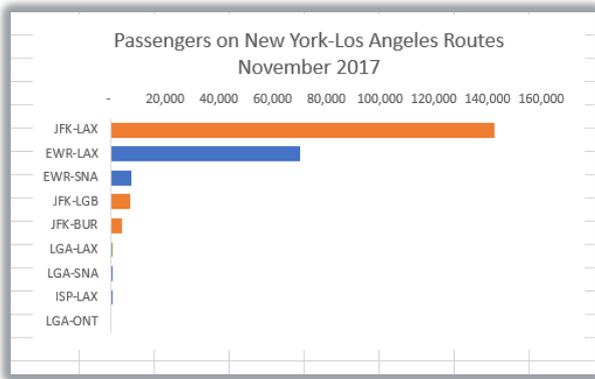
Once you've scheduled a report, you can review it anytime by going to the My OAG tab at the top of the screen and selecting scheduled reports from the dropdown. This lets you see all the reports you have scheduled, and you can then view individual reports, edit them or delete them from here. You can also see when the report was last run.



We'll go back now to the report output screen.



As before, we'll export the data to Excel and some quick analysis allows us to see the most popular routes and the market share each carrier has of passengers between New York and Los Angeles.



The **User Guide** link from DOT Analyser for this report takes you to our website where there is a short video with the same worked example of how to create and extract data using a T100 Market Report.

5 O&D TRAFFIC REPORTS

5.1 USING THE O&D TRAFFIC REPORTS (DETAILED) POWERTABLE

The **O&D Traffic Reports** use DB1B data and represent a 10% sample of all passenger trips taken. There are two O&D Reports, a detailed one and a summary level one. **The O&D Traffic Reports (Detailed)** has a few more options than the **O&D Traffic Reports (Summary)**, allowing you to analyse deeper and see data in terms of the ticketed coupons. There's the addition of Ticketed and Reporting carriers and a field to specify the connecting location.

The main difference is that the simplified report provides data at an Origin and Destination, or O&D level, and does not include data about how the passenger travelled between the Origin and Destination. What this means is there is no detail about the connecting airports or the itinerary in the Summary report.

Available Reports		
Traffic Reports (T100)	Origin & Destination Reports (DB1B)	Financial Reports (Form 41)
<p>Segment Traffic Reports Dynamic table to create a fully customised report for T100 Segment Data for both Domestic and International flights to analyse passenger, capacity, freight and mail statistics</p>	<p>O & D Traffic Reports (Detailed) Create a fully customised report for all DB1B Data to analyse complete passenger itineraries including connection points and fares paid by passengers</p>	<p>Financial Reports Analyse Airline financial reports including both revenue and cost breakdowns</p>
<p>Market Traffic Reports Dynamic table to create a fully customised report for T100 Market Data for both Domestic and International flights to analyse local passengers, freight and mail</p>	<p>O & D Traffic Reports (Summary) Create a fully customised report to analyse DB1B Data by origin and destination including passenger numbers and fares paid</p>	<p>Traffic Summary Reports (T1, T2, T3) View a Summary of T100 Traffic Data and see how each airline performs using standard industry metrics</p>

DB1B data is also only collected from US carriers so there is no international data available for foreign carriers. International data for US carriers is only available to US parties.

DB1B Detailed - Power Table Report

Parameters

- Dimensions & Metrics
- Period
- Carrier
- Origin & Destination
- Coupons
- Ticketed Revenue
- Cabin Type

Dimension & Metrics ?

Dimensions

Clear

- ▶ Carrier
- ▶ Origin & Destination
- ▶ Ticketed Revenue
- ▶ Distance
- ▶ Coupons

Metrics

Clear

- ▶ Ticketed Revenue
- ▶ Distance

Period ?

From

To

Use Time Series Latest Available Data : 3rd Qtr 2017

Carrier ?

- ▶ Operating Carrier
- ▶ Ticketed Carrier
- ▶ Reporting Carrier

Origin & Destination ?

DB1B Detailed - Power Table Report

Parameters

- Dimensions & Metrics
- Period
- Carrier
- Origin & Destination
- Coupons
- Ticketed Revenue
- Cabin Type

Dimension & Metrics ?

Dimensions

Clear

- ▶ Carrier
- ▶ Origin & Destination
- ▶ Ticketed Revenue
- ▶ Distance
- ▶ Coupons

Metrics

Clear

- ▶ Ticketed Revenue
- ▶ Distance

Period ?

From

To

Use Time Series Latest Available Data : 3rd Qtr 2017

Carrier ?

- ▶ Operating Carrier
- ▶ Ticketed Carrier
- ▶ Reporting Carrier

Origin & Destination ?

- ▶ Coupons
 - Coupon Count
 - Fare Codes by Coupon
 - Frequent Flyer Indicator
 - Operating Carrier Coupon Types
 - Ticketed Carrier Coupon Types

Clear

- ▶ Carrier
- ▶ Origin & Destination
- ▶ Ticketed Revenue
 - Individual Ticket Value (US Dollars)
- ▶ Distance
 - Itinerary Circuit Distance (KM)
 - Itinerary Circuit Distance (NM)
 - Itinerary Circuit Distance (SM)
- ▶ Coupons

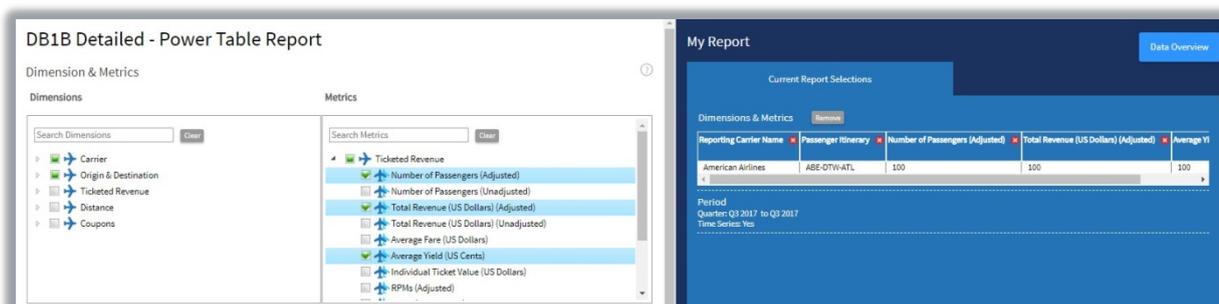
5.2 O&D TRAFFIC REPORT (DETAILED) - WORKED EXAMPLE

We'll look firstly at the detailed report. You will see from the dimensions and metrics that these look a little different to those in the Traffic reports. In addition to the standard Carrier and Origin and Destination options, we now have 3 additional dimensions. These are Ticketed Revenue, Distance and Coupons. These are shown in more detail in the boxes above.

We'll run through a worked example here to demonstrate how best to access data from this report.

We're going to look at how people travel between New York and Hawaii. We'll be able to see which routings are most popular, what the average fares are by airline and how they differ according to the choice of routing.

We start by choosing the dimensions and metrics which define the structure of our report. We want to see **Carrier** so we'll select **Reporting Carrier Name**. Then we'll open the **Origin and Destination** dimensions and scroll down to **Passenger Itinerary** and select that. On **Metrics**, we want to see data for all passengers, so we'll open the **Ticketed Revenue** option and select **Number of Passengers (Adjusted)**. This is the number in the sample data which has been scaled up by a factor of 10.



It's worth noting here that we have both the number of passengers and an adjusted number of passengers because the US DOT's O&D data comes from a sample of the whole market. The actual data is the passenger numbers in the dataset, while the adjusted figure is the data adjusted as if it were the whole market. In this instance because the survey is a sample of 10% of all tickets it simply means that the adjusted passenger number is 10 times higher than the actual passengers in the dataset. It will usually be the adjusted number, which reflects the whole market, that you will need for analysis.

We also want to look at average fares and yields so we'll select **Total Revenue Adjusted** and **Average Yield**.

The structure of our report is starting to take shape. Now we need to select some more parameters as if we click to run our report at this stage, we'll get data for every airline and every route in the database and every time period. First, we'll choose the time period we want to look at in this case, and we'll use the default option which is the 3rd Quarter 2017 at the tie we are working on this example. The time periods for this report are Quarters or Years.

Period ?

Quarter From

To

Use Time Series Latest Available Data : 3rd Qtr 2017

We want to see all carriers so we don't need to select anything here, but we could have chosen to specify the **Reporting Carrier** or carriers, the **Ticketed Carrier**, or the **Operating Carrier**.

In each of these fields you can or choose one, or a number of carriers, or select carriers that are domiciled in a particular country or region. You can also exclude carriers in this section by clicking on **Add Exclusion** which opens up a new box as shown below.

Carrier

Operating Carrier ?

Operating Carrier [Add Exclusion](#)

Sole Carrier

Domicile ?

Country Region

[Add Exclusion](#)

[Ticketed Carrier](#)

[Reporting Carrier](#)

Carrier

Operating Carrier ?

Operating Carrier [Add Exclusion](#) Excluded Operating Carrier [Add Exclusion](#)

Sole Carrier

Origin & Destination ?

To/From

Origin ?

Airport City State Country Region

[Add Exclusion](#)

Connecting ?

Airport City State Country Region

[Add Exclusion](#)

Destination ?

Airport City State Country Region

[Add Exclusion](#)

O+D Pairs

Direction

Domestic/International

Distance to

The next set of parameters are the **Origin and Destination**. We want the origin to be the city of New York and the destination to be the state of Hawaii. We don't need to specify a connecting point here as we want to see all possible routings taken by passengers, but we could do if we wanted to see a specific routing. The last parameters in the **O&D Traffic Reports (Detailed)** are towards the bottom. They are **Coupons**, **Ticketed Revenue** and **Cabin Type**. The **Coupon Count** allows you to specify the maximum, minimum or exact number of coupons per ticket. This equates to the number of trip segments in a true O&D passenger trip. The **Fare Class**

Coupons ?

Coupon Count

Fare Class

Operating Carrier

Trip Qualifier

Ticketed Carrier

Ticketed Revenue ?

Passenger (Pax)

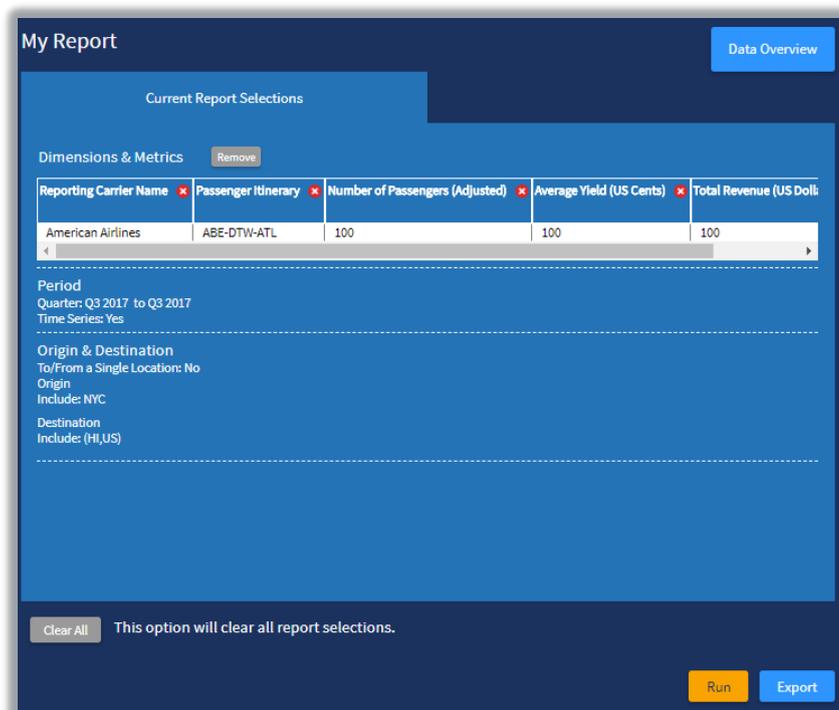
Cabin Type ?

option allows you to select the different coupon fare class to be included in your search.

This allows you to specify or exclude Frequent Flyer coupons. The **Trip Qualifier** allows you to select coupons that are either the first, last, middle or only coupon within a ticket. Users may select one or more entries in this field.

You can select operating carrier and/or ticketed carrier in this field too. You can also filter the Adjusted number of passengers transported here using **Ticketed Revenue** function. This allows you to exclude data where the number of passengers/freight is very small and may not reflect a significant market size.

Lastly **Cabin Type** allows you to select First, Business or Economy, or use the default option which is all ticket classes. In our worked example we won't amend any of these. Now we can check the current report selections to make sure it has all the fields we need and, if so, click on run.



Once we click run this is what the report looks like and we can export, schedule or save it for use another time.

Showing 1 - 10 Of 414 Results Number Of Rows Per Page 10

Reporting Carrier Name	Passenger Itinerary	Number Of Passengers (Adjusted)	Average Yield (US Cents)	Total Revenue (US Dollars) (Adjusted)	TimeSeries
Alaska Airlines Inc.	EWB-SAN-HNL	30	9.73	14,706.50	20173
Alaska Airlines Inc.	EWB-SEA-KOA-OGG	10	12.54	6,489.90	20173
Alaska Airlines Inc.	EWB-SEA-OAK-PDX-OGG	10	1.56	963.70	20173
American Airlines Inc.	EWB-DFW-KOA-HNL	10	10.53	5,539.20	20173
American Airlines Inc.	EWB-DFW-LAX-LIH	10	11.69	6,103.60	20173
American Airlines Inc.	EWB-PHX-LAX-HNL	20	18.63	18,844.80	20173
American Airlines Inc.	EWB-PHX-LIH	120	12.92	79,226.90	20173
American Airlines Inc.	EWB-PHX-SFO-LAX-HNL	10	8.10	4,599	20173
American Airlines Inc.	JFK-LAX-HNL-OGG	10	13.60	6,976.10	20173
American Airlines Inc.	JFK-LAX-OGG	600	10.40	309,622.10	20173

414 result(s) found, displaying result(s) from 1 to 10. Page 1 / 42

If we click on the small paper icon at the bottom of the data report, this allows us to download the data straight to MS Excel without going via the export function. This functionality is only available where there are less than 1,000 rows of data. The default display here is for 10 rows of data, but you can change that to show 25, 50 or 100. You can also sort each column by highest to lowest by clicking on the up and down arrows to the right of each column heading. You can also filter the results using the box next to the **Number of Rows** field, perhaps by carrier, or for a specific passenger itinerary.

Exporting this data to a spreadsheet would allow you to carry out some analysis on how pricing of direct routes compares with connecting routes.

The user guide link from DOT Analyser for this report takes you to our website where there is a short video with the same worked example of how to create and extract data using the [O&D Market Traffic Reports \(Detailed\)](#).

5.3 USING THE O&D TRAFFIC REPORTS (SUMMARY) POWERTABLE

The other O&D reporting option is the [O&D Market Traffic Reports \(Summary\)](#). As we noted in the section above this report is at a summary level and does not include data about how passengers travel between an Origin and a Destination.

OAG DOT analyser

DB1B Summary - Power Table Report

Parameters

- Dimensions & Metrics
- Period
- Carrier
- Origin & Destination
- Coupons
- Cabin Type

Dimension & Metrics

Dimensions

Search Dimensions

- Carrier
- Origin & Destination

Metrics

Search Metrics

- Ticketed Revenue

Period

Quarter From To

Use Time Series Latest Available Data : 3rd Qtr 2017

Carrier

Operating Carrier

Origin & Destination

To/From

Origin

Airport City State Country Region

Destination

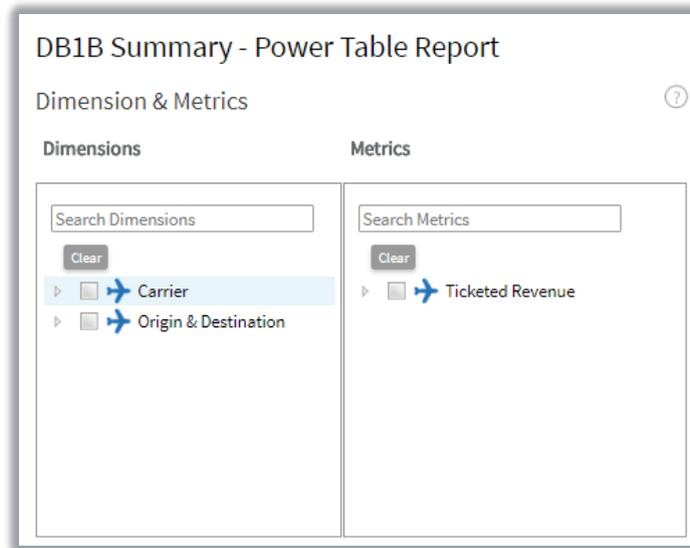
Airport City State Country Region

Direction

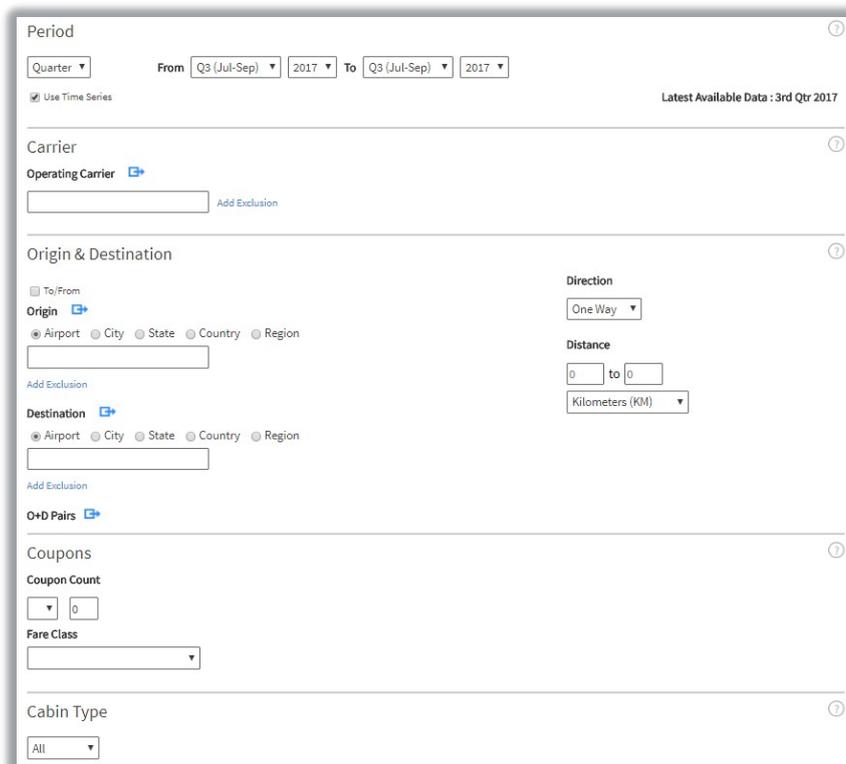
Distance

to

The main differences between the summary and detailed reports are in the Dimensions and Metric sections. The Summary report has the following dimensions and metrics



The remaining parameters in the **O&D Traffic Reports (Summary)** are similar to those of the **O&D Traffic Reports (Detailed)**, with one main difference. The coupon section just has the coupon count and fare class options.



If we were to replicate the query we ran in the previous section, choosing Airport O&D instead of itinerary (which isn't available to us in this report), the output looks like this:

DB1B Summary - Power Table Report

[Back to report fields](#)
[Export](#)
[Schedule](#)
[Save](#)

Showing 1 - 10 Of 81 Results Number Of Rows Per Page: 10

Carrier Name	O&D Pair (Airport)	Number Of Passengers (Adjusted)	Average Yield (US Cents)	Total Revenue (US Dollars) (Adjusted)	TimeSeries
United Air Lines Inc.	EWR-HNL	16,860	10.94	9,200,699.50	20173
Hawaiian Airlines Inc.	JFK-HNL	15,560	10.16	7,880,137.50	20173
United Air Lines Inc.	EWR-OGG	3,400	10.89	1,820,048.60	20173
Delta Air Lines Inc.	JFK-HNL	3,080	9.13	1,420,781.50	20173
American Airlines Inc.	JFK-HNL	2,470	9.87	1,231,597.40	20173
Delta Air Lines Inc.	JFK-OGG	2,050	9.21	947,651.70	20173
Hawaiian Airlines Inc.	JFK-OGG	2,020	10.58	1,088,074.60	20173
Mixed Carriers	JFK-HNL	1,920	10.90	1,080,159.50	20173
American Airlines Inc.	JFK-OGG	1,600	9.09	724,633.70	20173
Delta Air Lines Inc.	JFK-KOA	1,410	8.69	622,338.40	20173

⏪ ⏩ ⏴ ⏵

81 result(s) found, displaying result(s) from 1 to 10. Page 1 / 9

My Report

6 FINANCIAL REPORTS (FORM 41)

6.1 USING THE FINANCIAL REPORTS POWERTABLE

The **Financial Reports** in DOT Analyser enable you to carry out fast and straightforward analysis of the airline financial data gathered by the US Department of Transportation via its Form 41.

The Form41 data is a key source of financial information about US airlines including balance sheets, income statements, employee counts and traffic summaries. US Federal law requires that most American passenger and cargo airlines report financial and operating information on a monthly, quarterly or semi-annual basis.

There are two options in the Financial Reports (Form 41) section, the Financial Reports and Traffic Summary Reports. The Traffic Summary Reports are derived from T100 data but aggregated to remove sensitivities about data disclosure. They provide a high-level view of airline (T1), aircraft (T2) and airport performance (T3).

Available Reports		
Traffic Reports (T100)	Origin & Destination Reports (DB1B)	Financial Reports (Form 41)
<p>Segment Traffic Reports Dynamic table to create a fully customised report for T100 Segment Data for both Domestic and International flights to analyse passenger, capacity, freight and mail statistics</p>	<p>O & D Traffic Reports (Detailed) Create a fully customised report for all DB1B Data to analyse complete passenger itineraries including connection points and fares paid by passengers</p>	<p>Financial Reports Analyse Airline financial reports including both revenue and cost breakdowns</p>
<p>Market Traffic Reports Dynamic table to create a fully customised report for T100 Market Data for both Domestic and International flights to analyse local passengers, freight and mail</p>	<p>O & D Traffic Reports (Summary) Create a fully customised report to analyse DB1B Data by origin and destination including passenger numbers and fares paid</p>	<p>Traffic Summary Reports (T1, T2, T3) View a Summary of T100 Traffic Data and see how each airline performs using standard industry metrics</p>

Like the Traffic & O&D reports, it has numerous options to tailor the data request to what you need, but not every box needs to be filled in every time. Often you may only need to fill in a few of the options, so it's worth spending a bit of time familiarising yourself with the query screen.

To get to the query screen you can click through on one of the report headings. Let's go firstly to the Financial Reports. This is where you can quickly and easily extract data about airline financial performance. There are 9 tables for Large Airlines (revenue >\$20m) and 5 tables for Small/Medium Airlines (revenues <20m).

OAG DOT analyser

Parameters

- Form 41 Tables
- Dimension & Metrics
- Period
- Carrier

Form 41 Power Table

Form 41 Tables

- Large > \$20m Airlines
 - B1 - Balance Sheet
 - P1.2 - Profit and Loss
 - P5.1 - Aircraft Operating Expenses (Carriers with Op. Rev <\$100M)
 - P5.2 - Aircraft Operating Expenses (Carriers with Op. Rev >\$100M)
 - P6 - Operating Expenses (Carriers with Op. Rev. > \$20m)
 - P7 - Operating Expenses (Carriers with Op. Rev > \$1Bn)
 - P10 - Detailed Monthly Employee Stats
 - P1(a) - Annual Employee Totals
 - P12(a) - Fuel
- Small/Medium < \$20m Airlines
 - B1.1 - Balance sheet
 - P1.1 - Profit and Loss
 - P5.1 - Aircraft Operating Expenses (Carriers with Op. Rev <\$20M)
 - P1(a) - Annual Employee Totals

Dimension & Metrics

Dimensions

- Carrier Code
- Carrier Name
- Carrier Group
- Carrier Type
- Active/Inactive

Metrics

- Current Assets
- Investments and Special Funds
- Operating Property and Equipment
- NonOperating Property and Equipment
- Other Assets
- Total Assets
- Current Liabilities
- NonCurrent Liabilities
- Deferred Credits

Period

Quarter: [v] From: Q3 (Jul-Sep) 2017 To: Q3 (Jul-Sep) 2017

Use Time Series

Latest Available Data : 3rd Qtr 2017

For each table, the dimensions and metrics change according to what's in each table. The next two screenshots show how they change between the P5.2 Aircraft operating expenses table and the P12(a) Fuel table. In the **APPENDIX** we list each of the associated dimensions and metrics for each table, so you can refer to those if necessary.

Form 41 Tables ?

- Large > \$20m Airlines
 - B1 - Balance Sheet
 - P1.2 - Profit and Loss
 - P5.1 - Aircraft Operating Expenses (Carriers with Op. Rev <\$100M)
 - P5.2 - Aircraft Operating Expenses (Carriers with Op. Rev >\$100M)
 - P6 - Operating Expenses (Carriers with Op. Rev. > \$20m)
 - P7 - Operating Expenses (Carriers with Op. Rev > \$1Bn)
 - P10 - Detailed Monthly Employee Stats
 - P1(a) - Annual Employee Totals
 - P12(a) - Fuel
- Small/Medium < \$20m Airlines
 - B1.1 - Balance sheet
 - P1.1 - Profit and Loss
 - P5.1 - Aircraft Operating Expenses (Carriers with Op. Rev <\$20M)
 - P1(a) - Annual Employee Totals

Dimension & Metrics ?

Dimensions

Clear

- Carrier Code
- Carrier Name
- Carrier Group
- Carrier Type
- Carrier Region
- Active/Inactive
- Equipment Group
- Equipment Type
- Equipment Flight Type

Metrics

Clear

- Flying Operations
- Direct Maintenance - Flight Equipment
- Applied Maintenance Burden - Flight Equipment
- Net Obsolescence And Deterioration - Expendable Parts
- Depreciation - Flight Equipment
- Amortization Flight Equipment
- Expense Of Interchange Aircraft
- Aircraft Operating Expense (Direct Operating Expense)
- Other Depreciation and Amortization (Non-Flight Equipment)

Form 41 Tables ?

- Large > \$20m Airlines
 - B1 - Balance Sheet
 - P1.2 - Profit and Loss
 - P5.1 - Aircraft Operating Expenses (Carriers with Op. Rev <\$100M)
 - P5.2 - Aircraft Operating Expenses (Carriers with Op. Rev >\$100M)
 - P6 - Operating Expenses (Carriers with Op. Rev. > \$20m)
 - P7 - Operating Expenses (Carriers with Op. Rev > \$1Bn)
 - P10 - Detailed Monthly Employee Stats
 - P1(a) - Annual Employee Totals
 - P12(a) - Fuel
- Small/Medium < \$20m Airlines
 - B1.1 - Balance sheet
 - P1.1 - Profit and Loss
 - P5.1 - Aircraft Operating Expenses (Carriers with Op. Rev <\$20M)
 - P1(a) - Annual Employee Totals

Dimension & Metrics ?

Dimensions

Clear

- Carrier Code
- Carrier Name
- Carrier Group
- Carrier Type
- Carrier Region
- Active/Inactive
- Schedule Type
- Business Type

Metrics

Clear

- > Fuel

Each table has a different reporting period, so if you open **Data Overview** on the right of the screen, in the My Report section, you can see at a glance what the latest reporting period is for each table.

Data Overview		
Table Name	Description	Latest Report Period
Form 41 - B-1	This table contains quarterly operating balance sheet statements for large certificated U.S. air carriers with annual operating revenues of \$20 million or more.	3rd Qtr 2017
Form 41 - B-1.1	This table contains semi-annual operating balance sheet statements for U.S. air carriers with annual operating revenues of less than \$20 million.	1st half 2017
Form 41 - P-10	Annual Employee Statistics by Labor Category.	2016
Form 41 - P-1.1	This table provides semi-annual profit and loss statements for carriers with annual operating revenues of \$20 million or less.	1st half 2017
Form 41 - P-1.2	This table provides quarterly profit and loss statements for carriers with annual operating revenues of \$20 million or more.	3rd Qtr 2017
Form 41 - P-12(a)	This table contains monthly reported fuel costs, and gallons of fuel consumed, by air carrier and category of fuel use.	Sep 2017
Form 41 - P-3(a)	Monthly Interim Operations Report of Air Carrier Employment.	Jan 2018
Form 41 - P-5.1	The table contains aircraft operating expenses for large, and medium regional air carriers. The data for large regional carriers are available on a quarterly basis, while for medium carriers data are available semiannually.	3rd Qtr 2017
Form 41 - P-5.2	The table contains detailed quarterly aircraft operating expenses for large certificated U.S. air carriers.	3rd Qtr 2017
Form 41 - P-6	These data contain quarterly operating expenses, by objective grouping, for carriers with annual operating revenues of \$20 million or more.	3rd Qtr 2017
Form 41 - P-7	This table contains quarterly operating expense statements, by functional grouping, for large certificated U.S. air carriers.	3rd Qtr 2017

6.2 O&D TRAFFIC REPORT (SUMMARY) - WORKED EXAMPLE

We'll take a look at an example now which is the best way to illustrate how to use these reports. We're going to compare fuel use by the four largest airlines in the US, both in terms of gallons and cost, and then we can compare that with data about the miles flown for the same period from the traffic report, to get a sense of which airline is managing to keep their fuel costs lowest.

P12(a) - Fuel
 Small/Medium < \$20m Airlines
 B1.1 - Balance sheet
 P1.1 - Profit and Loss
 P5.1 - Aircraft Operating Expenses (Carriers with Op. Rev <\$20M)
 P1(a) - Annual Employee Totals

Dimension & Metrics

Dimensions

Search Dimensions

Clear

- Carrier Code
- Carrier Name
- Carrier Group
- Carrier Type
- Carrier Region
- Active/Inactive
- Schedule Type
- Business Type

Metrics

Search Metrics

Clear

- Fuel
- Gallons
- Cost

To do this we'll start with the P12(a) report for the large airlines. This is the report that provides data about fuel use.

The dimensions and metrics for this report are quite simple. We'll select just **Carrier Name** and then looking at metrics we can see there are just two, which are **Gallons** and **Cost**. We want to see both of these in the data, so we'll select them both.

Now we need to define the time period that we want the data to be extracted for, so we move down to time period. For this report, data is available for month, quarter, half year and year. The latest data available for this report is September

2017 which is the default month, so we'll use that.

Period

Month Sep To Latest Available Data : Sep 2017

We could choose to split this data out into scheduled or charter airlines or by civilian or military flights, but in this case, we'll leave the defaults as they are, as we will specify the airlines we want to consider below in the **Reporting Carrier field**. We'll enter American Airlines, United Airlines, Delta Air Lines and Southwest Airlines.

Carrier

Reporting Carrier

American Airlines Inc. (AA), United Airlines, Delta Air Lines, Southwest Airlines

Carrier Status

Carrier Region

Carrier Type

Carrier Group

My Report Data Overview

Current Report Selections

Dimensions & Metrics Remove

Carrier Name	Gallons	Cost
American Airlines	26.12	62.18

Form 41 Table
Table: P12(a) - Fuel

Period
Month: Sep2017 to Sep2017
Time Series: Yes

Carrier
Reporting Carrier
Included: AA, UA, DL, WN

Clear All This option will clear all report selections.

Run Export

We don't need to add anything else to this query as we have all we need. We can check what parameters have been selected by reviewing the **My Report - Current Report Selection** area of the screen.

We can see the dimensions and metrics at the top, followed by which table we are extracting data for, then the time period and the carriers we want to include.

If we decided we wanted to remove any of the dimensions and metrics, clicking on the red cross in each field allows us to do that.

For now, though, we'll click run as we're happy with the current report selection.

Here's the data.

Form 41 Power Table Back to report fields Export Schedule Save

Showing 1 - 4 Of 4 Results Number Of Rows Per Page 10 Filter Results

Carrier Name	Gallons	Cost	TimeSeries
American Airlines Inc.	277,260,454	474,298,088	201709
Delta Air Lines Inc.	283,484,031	498,229,067	201709
Southwest Airlines Co.	154,648,357	303,063,218	201709
United Air Lines Inc.	276,441,284	478,835,918	201709

4 result(s) found, displaying result(s) from 1 to 4. Page 1 / 1

My Report

You can see that the gallons and cost for each airline is displayed and as before, you can export, schedule or save this query. Clicking on the paper symbol in the bottom right hand corner allows you to directly export this data, opening it up as a CSV file. It doesn't export the parameters or report information, just the raw data and headings as shown below, but if you're doing some quick analysis this might be all you need.

A	B	C	D	E
Carrier Name	Gallons	Cost	TimeSeries	
American Airlines Inc.	277,280,454	474,298,088	201709	
Delta Air Lines Inc.	283,484,031	498,229,067	201709	
Southwest Airlines Co.	154,648,357	303,063,218	201709	
United Air Lines Inc.	276,441,284	478,835,918	201709	

As we noted above, we could easily now run a Traffic Report to identify the miles flown for these carriers for this time period to identify which has the lowest respective fuel costs.

The **User Guide** link from DOT Analyser for this report takes you to our website where there is a short video with the same worked example of how to create and extract data using a Form41 Financial report.

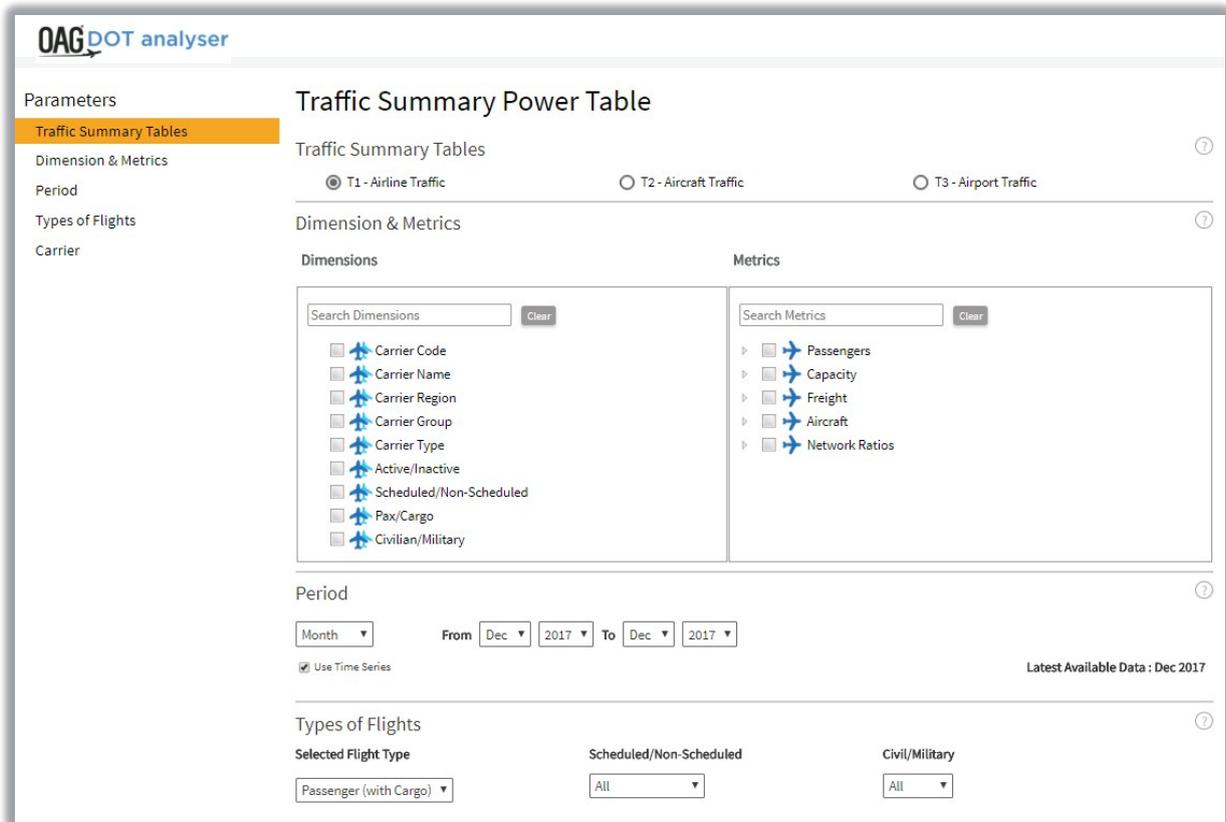
7 TRAFFIC SUMMARY REPORTS (FORM 41)

7.1 USING THE TRAFFIC SUMMARY REPORTS POWERTABLE

The **Traffic Summary Reports** in DOT Analyser summarises the T100 data which is also available elsewhere in DOT Analyser, in the T100 Traffic Reports. This data is available back to 1981 for US domestic traffic and from 1990 for international traffic if your subscription includes that. You may ask why this is useful given that this data can be accessed in the Traffic Reports section. The answer is partly because the data here is summarised, or aggregated, and so sensitive data that was not available to all users can now be shown in the summarised form.

For example, data reported for international flights is included here where it is not available in the T100 data for non-US carriers which are not permitted to access the international data in T100.

If we click through to the **Traffic Summary Reports** from the DOT Analyser Home screen this is what we see.



There are three **Traffic Summary** tables.

- The first is the T1-Airline Traffic report which provides monthly summaries of airline traffic contained in the T100 data by carrier and service class. Although the T1 report contains data on passenger numbers, there is no data about their routings, or where they got on or off their flights.
- The second is the T2 – Aircraft Traffic report which provides quarterly traffic data by carrier, aircraft type, service class and region. Again, there is no routing data.
- The third report is the T3-Airport Traffic report which provides a quarterly summary of airport data.

We'll look at each of the reports in turn.

7.2 T1 AIRLINE TRAFFIC REPORT

Make sure the **T1 Airline Traffic** report option is selected at the top of the screen, above dimensions and metrics. You'll see there are 9 dimensions and 5 metrics, all relating to airlines and flight types. We're going to walk through running a report here to best demonstrate how this report works.

Traffic Summary Power Table

Traffic Summary Tables ?

T1 - Airline Traffic
 T2 - Aircraft Traffic
 T3 - Airport Traffic

Dimension & Metrics ?

Dimensions

Clear

- Carrier Code
- Carrier Name
- Carrier Region
- Carrier Group
- Carrier Type
- Active/Inactive
- Scheduled/Non-Scheduled
- Pax/Cargo
- Civilian/Military

Metrics

Clear

- ▶ Passengers
- ▶ Capacity
- ▶ Freight
- ▶ Aircraft
- ▶ Network Ratios

Period ?

From

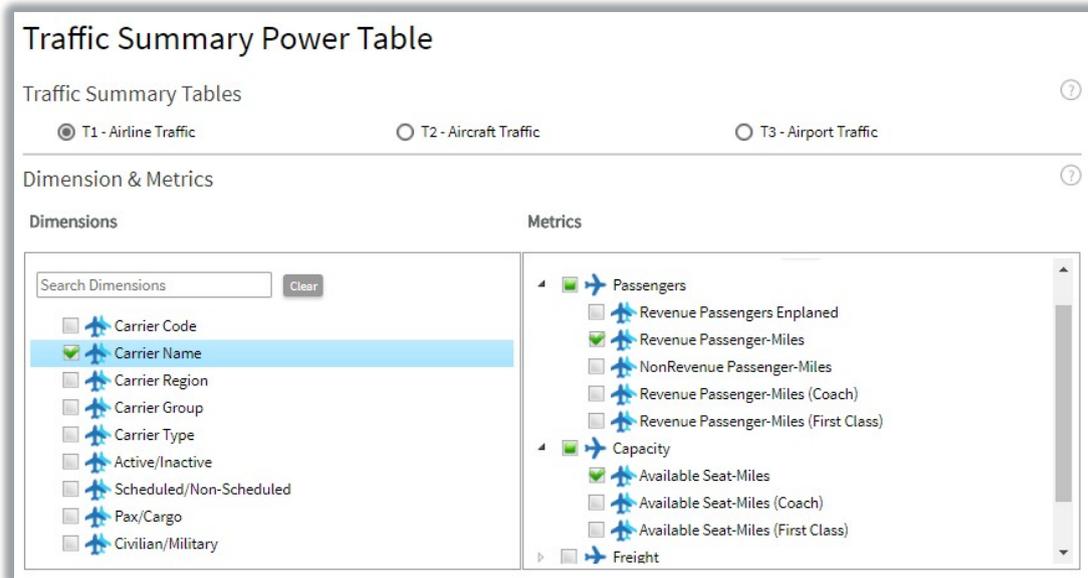
To

Use Time Series Latest Available Data : Dec 2017

7.3 T1 AIRLINE TRAFFIC - WORKED EXAMPLE

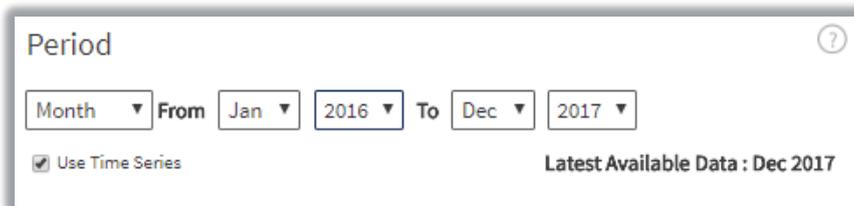
We'll take a look at Alaska Airlines and Virgin America through 2016 and 2017 to understand what their combined capacity and traffic was in the run up to the announcement that Alaska Airlines would be acquiring Virgin America, and through the followign months. For this query we just need to select carrier name in dimensions so we'll just click on carrier name.

For metrics, we want to see passengers and capacity. When we click on **Passengers**, we can see there are 5 options. The first, **Revenue Passengers** enplaned is simply the number of passengers who board flights. The other passenger options are variations on revenue passenger miles and non revenue passenger miles. **Revenue Passenger Miles** (RPMs) are another way used by the industry of measuring traffic. We'll use **Revenue Passenger Miles** as we want to look at RPMs.



Similarly, there are 3 different options for **Capacity**, this time these are related to the cabin class. We'll choose the first one, **Available Seat Miles**.

Now we need to select the time period. We want to look at months, and see how the data changes over the months, so we'll choose month as the time period (this is the default) and the range from January 2016 to December 2017. As we want to see each month displayed, we'll make sure that Use Time Series is ticked, as otherwise, the data would be aggregated into a single figure.



The last selection we need for this worked example is the **Carriers**. We enter Virgin America and Alaska Airlines in the reporting carrier field, either using the airline two letter codes or starting to type in the full name.

Types of Flights ?

Selected Flight Type: Scheduled/Non-Scheduled: Civil/Military:

Carrier ?

Reporting Carrier: Add Exclusion Carrier Status:

Carrier Region: Carrier Type:

Carrier Group:

That’s our query populated, and we can check the **Current Report Selections** to see that we’ve added all the required dimensions, metrics and parameters.

My Report Data Overview

Current Report Selections

Dimensions & Metrics Remove

Carrier Name ✕	Revenue Passenger-Miles ✕	Available Seat-Miles ✕
American Airlines	42.05	60.72

Table
T1 - Airline Traffic

Period
Month: Jan2016 to Dec2017
Time Series: Yes

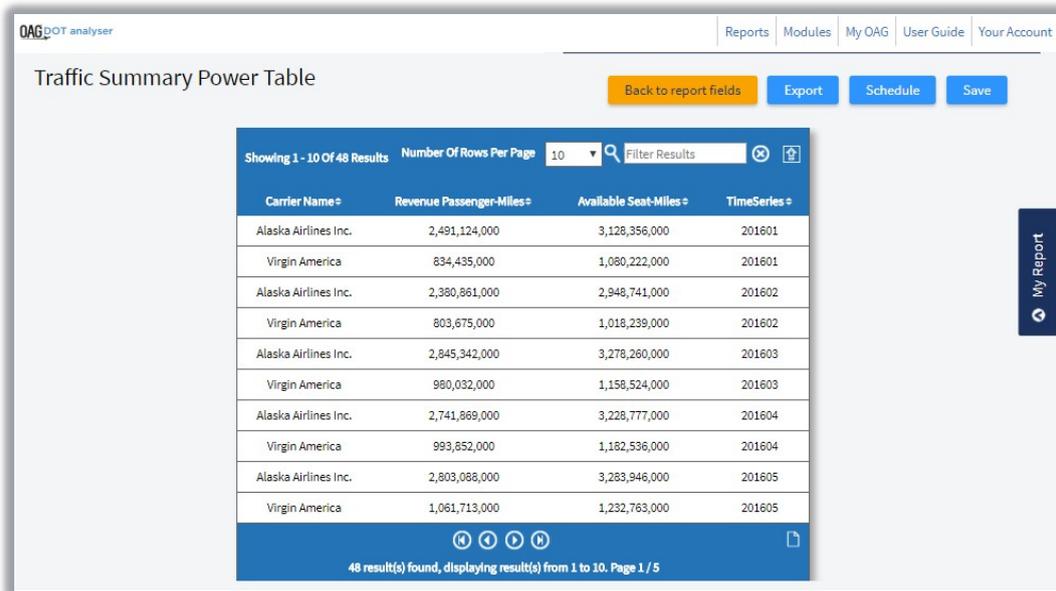
Types of Flights
FlightType: Passenger (with Cargo)
Scheduled/Non-Scheduled: All
Civil/Military: All

Carrier
Reporting Carrier
Included: VX, AS

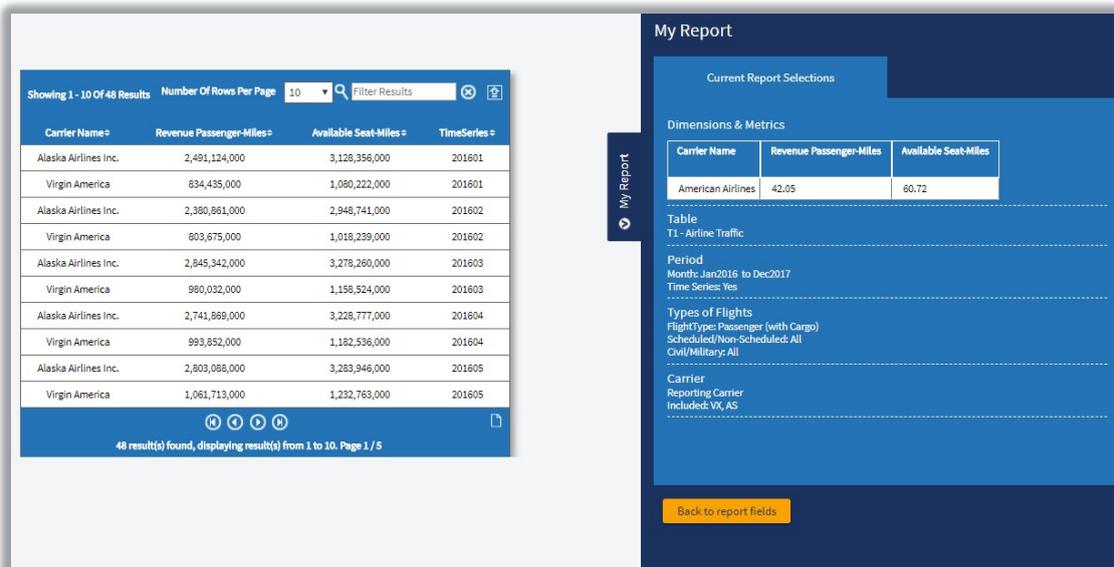
Clear All
This option will clear all report selections.

Run
Export

And here’s the data:

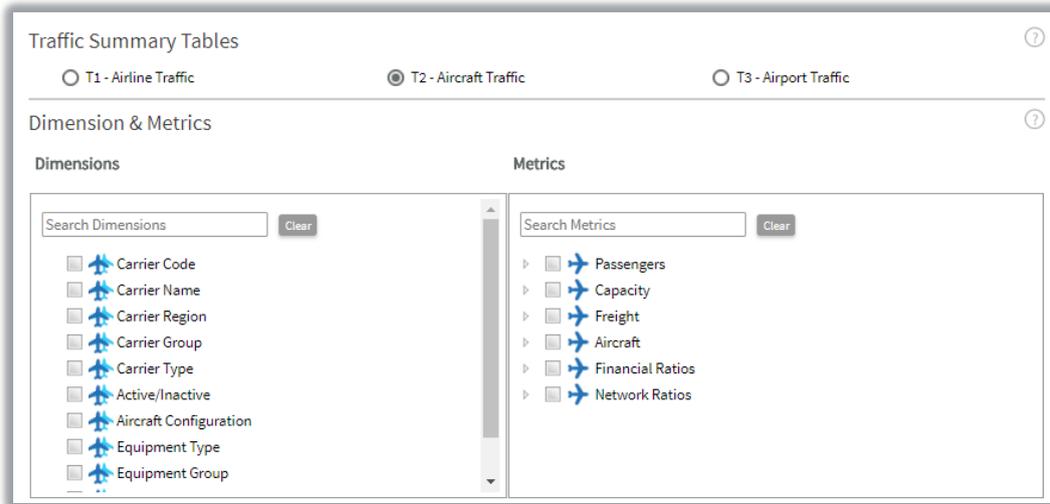


If we're happy with what we've generated, then as before, we can export, schedule or save the data. If we wanted to change anything, we'd click on **Back to report fields** which takes us back to the report query screen. If at any time in the output page you want to check the parameters of the query, if you click on **My Report**, on the right of the screen, it opens up **the Current Report Selection** summary page. You can then either close it if you are happy, or you can click on **Back to report fields** and amend your query as necessary.



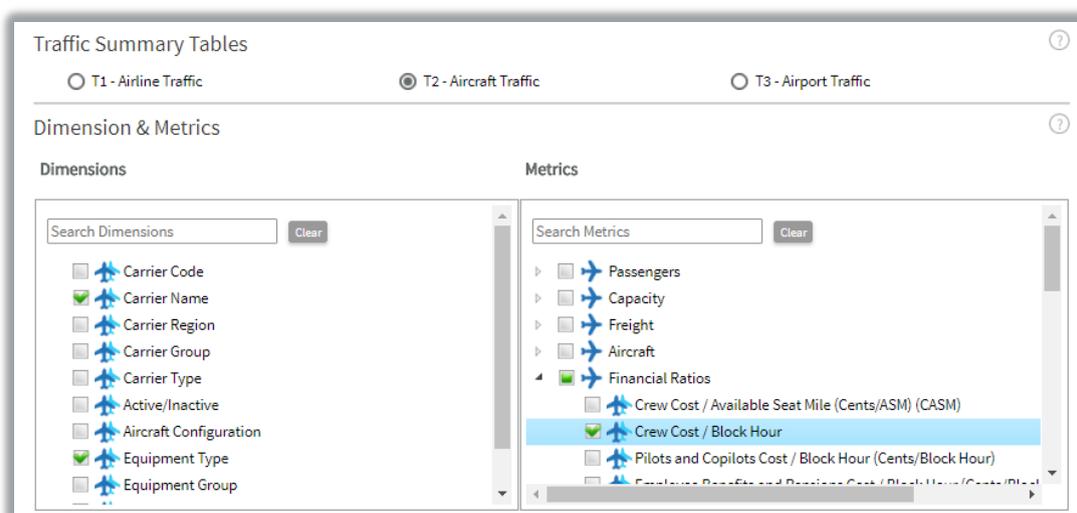
7.4 T2 AIRCRAFT TRAFFIC REPORT – WORKED EXAMPLE

Now we'll take a look at the **T2 Airline Traffic** report. The dimensions and metrics for this report are different to the previous one. Full details of the Dimensions and Metrics for each table are outlined in the **APPENDIX**. You'll remember that we noted at the beginning of this section that this report provides quarterly summaries. There are some financial and network ratios in this report, so it could be useful if we were looking for some indicative cost figures to include in a business case for example.

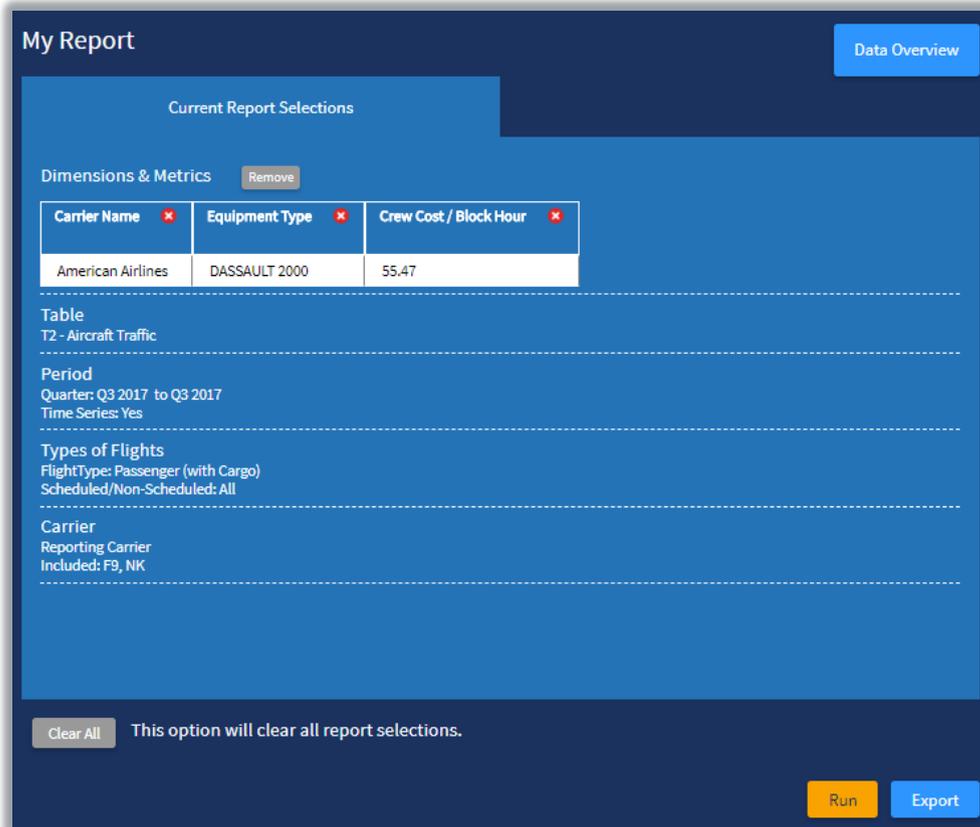


To highlight what data this report can provide, we've included another short worked example. In this case, we want to look at the difference between crew costs per block hour for Frontier Airlines and Spirit Airlines by aircraft type.

First, we'll choose the dimensions we need. These are **Carrier Name** and **Equipment Type**. Next, we'll select the metrics we need. These are **Financial Ratios**, and from there, we'll choose **Crew Cost/ Block Hour**.



We'll leave the period as it is, as we want to see the most recently available data and then move down to the **Carrier** parameters. We'll add Frontier Airlines and Spirit Airlines in the Reporting Carrier field and that's all we need for this relatively simple query.

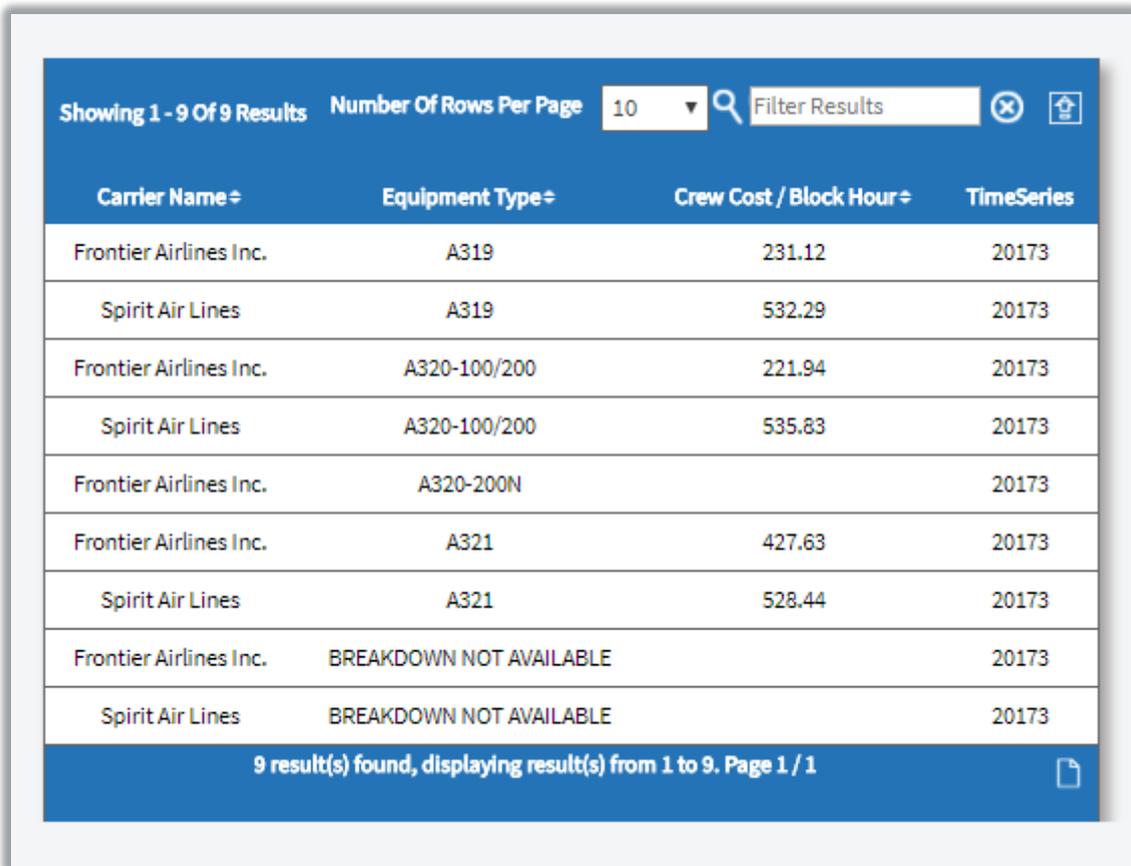


The screenshot shows the 'My Report' interface with the following sections:

- Current Report Selections**: A blue header bar.
- Dimensions & Metrics**: A section with a 'Remove' button containing a table with the following data:

Carrier Name	Equipment Type	Crew Cost / Block Hour
American Airlines	DASSAULT 2000	55.47
- Table**: T2 - Aircraft Traffic
- Period**: Quarter: Q3 2017 to Q3 2017, Time Series: Yes
- Types of Flights**: FlightType: Passenger (with Cargo), Scheduled/Non-Scheduled: All
- Carrier**: Reporting Carrier, Included: F9, NK
- Clear All**: This option will clear all report selections.
- Run** and **Export** buttons at the bottom right.

Now we'll click on run and see how the data looks.



Carrier Name ⇅	Equipment Type ⇅	Crew Cost / Block Hour ⇅	TimeSeries
Frontier Airlines Inc.	A319	231.12	20173
Spirit Air Lines	A319	532.29	20173
Frontier Airlines Inc.	A320-100/200	221.94	20173
Spirit Air Lines	A320-100/200	535.83	20173
Frontier Airlines Inc.	A320-200N		20173
Frontier Airlines Inc.	A321	427.63	20173
Spirit Air Lines	A321	528.44	20173
Frontier Airlines Inc.	BREAKDOWN NOT AVAILABLE		20173
Spirit Air Lines	BREAKDOWN NOT AVAILABLE		20173

Showing 1 - 9 Of 9 Results Number Of Rows Per Page 10 Filter Results

9 result(s) found, displaying result(s) from 1 to 9. Page 1 / 1

Straightaway you can see there are some significant differences between the two carriers on some of the aircraft types so in this case you might want to do some more analysis and look at some other measures.

7.5 T3 AIRPORT TRAFFIC REPORT – WORKED EXAMPLE

Now we’ll take a look at the third report in the Traffic Summary reports. **T3 Airport Traffic** data is specific to an individual airport so you have to select an airport to run the query for. The screenshot below shows that there are numerous dimensions, and all of these are shown in the **APPENDIX** for each report.

We’re going to show you how this report works by looking at the relative proportion of scheduled v’s non-scheduled, or charter, traffic an airport handles.

We’ll scroll down to the last option in dimensions which is **Scheduled/Non-scheduled** and choose that. Then for metrics we’ll simply choose **Revenue Passengers Enplaned**. We’ll choose the most recent time period, which is the 3rd Quarter of 2017 (remember this report is Quarterly).

We’re going to look at Chicago O’Hare in this example so we can either enter the airport three letter code (ORD) in the Origin field, or start typing the airport name.

Traffic Summary Power Table

Traffic Summary Tables ?

T1 - Airline Traffic
 T2 - Aircraft Traffic
 T3 - Airport Traffic

Dimension & Metrics ?

Dimensions

- Equipment Range
- Engine Group
- Airport Cd
- Airport Name
- Airport City Cd
- Airport City Name
- Airport State Cd
- Airport State Name
- Airport Country Cd
- Airport Country Name
- Scheduled/Non-Scheduled

Metrics

- Revenue Passengers Enplaned
- Revenue Aircraft Departures
- Total Departures Performed
- Total Freight
- Total Mail

Period ?

Quarter From To

Use Time Series Latest Available Data : 3rd Qtr 2017

Types of Flights ?

Scheduled/Non-Scheduled

Origin ?

Origin

Airport
 City
 State
 Country
 Region

[Add Exclusion](#)

We could also have chosen to specific a carrier here, or a group of carriers, but we'll leave the carrier option blank this time.

Origin ?

Origin

Airport
 City
 State
 Country
 Region

[Add Exclusion](#)

Carrier ?

Reporting Carrier

[Add Exclusion](#)

Carrier Region

Carrier Group

Carrier Status

Carrier Type

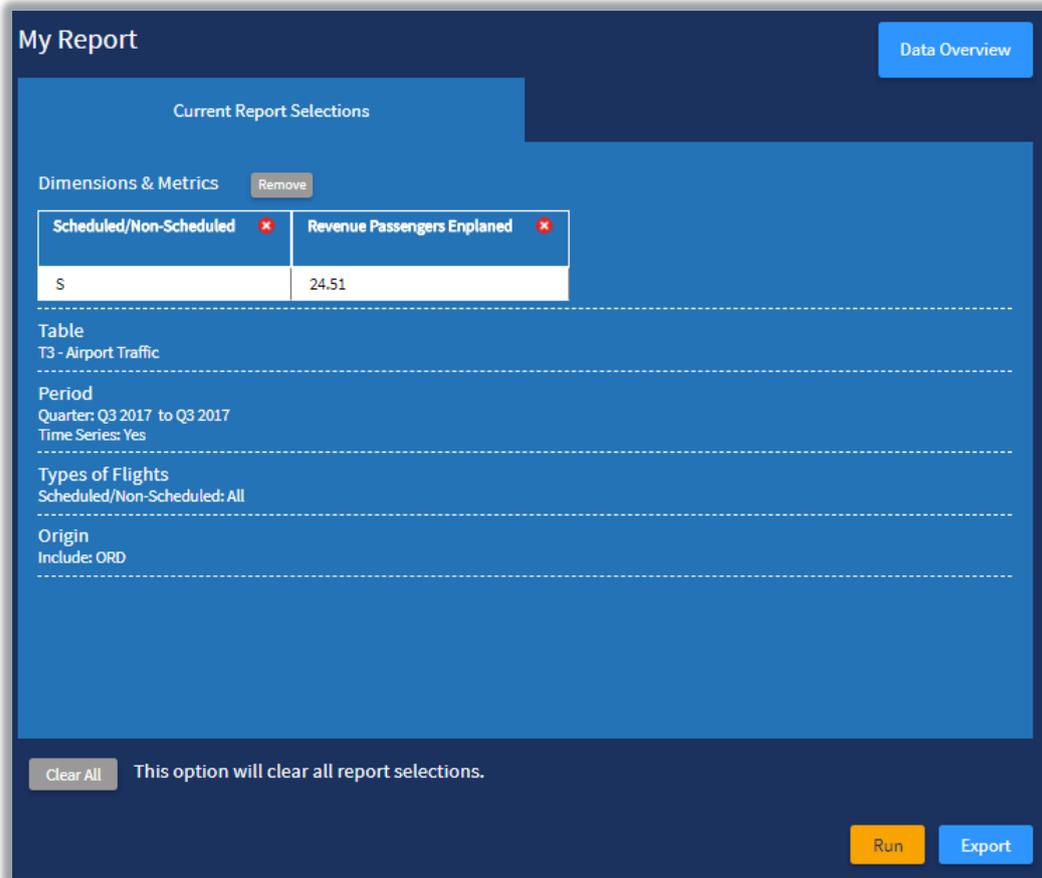
Equipment ?

Search Equipment

Manufacturers

Equipment Group

Once again we can check the Current Report Selections in My Report to make sure we've got everything there we need and then we can click to Run the report.



My Report Data Overview

Current Report Selections

Dimensions & Metrics Remove

Scheduled/Non-Scheduled	Revenue Passengers Enplaned
S	24.51

Table
T3 - Airport Traffic

Period
Quarter: Q3 2017 to Q3 2017
Time Series: Yes

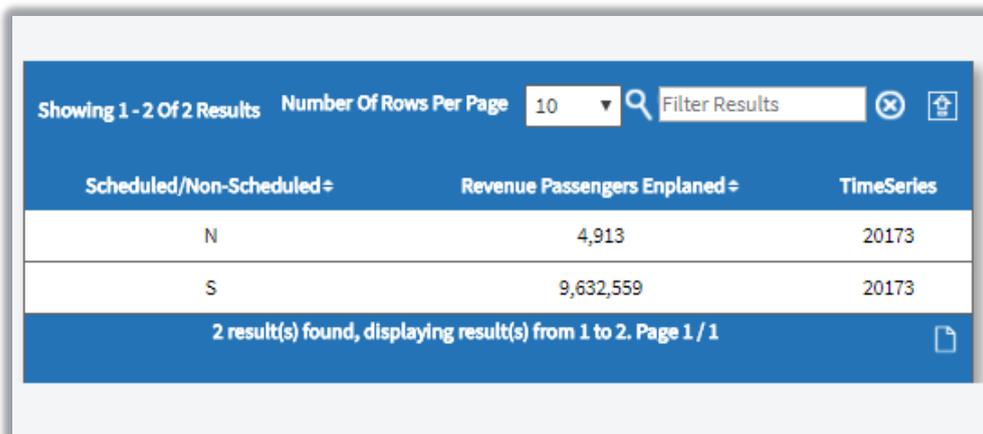
Types of Flights
Scheduled/Non-Scheduled: All

Origin
Include: ORD

Clear All This option will clear all report selections.

Run Export

Here are the results. We can see very quickly that Chicago O'Hare has a much larger share of scheduled traffic and that charter traffic is a very small element of traffic.



Showing 1 - 2 Of 2 Results Number Of Rows Per Page 10 Filter Results

Scheduled/Non-Scheduled	Revenue Passengers Enplaned	TimeSeries
N	4,913	20173
S	9,632,559	20173

2 result(s) found, displaying result(s) from 1 to 2. Page 1 / 1

You can access a video walking through these examples by going to the **User Guide** section at the top right-hand corner of the screen in the DOT Analyser. You'll find some worked example video guides for each type of report. These match up with the worked examples we use here, so you can use this guide and the videos to complement each other if necessary.

8 APPENDIX - DIMENSIONS, METRICS & CATEGORIES

8.1 T100 SEGMENT TRAFFIC REPORTS – DIMENSIONS AND METRICS

T100 SEGMENT			
Dimensions		Metrics	
Carrier	Carrier Code Carrier Name Domicile Carrier Country Domicile Carrier Region	Passengers & Freight	Total Passengers Transported Passenger Load Factor Freight Transported (US Tons) Mail Transported (US Tons) Freight & Mail Transported (US Tons)
Origin & Destination	Dep Airport Code Dep Airport Name Dep City Code Dep City Name Dep State Code Dep State Name Dep Country Code Dep Country Name Dep Region Code Dep Region Name Arr Airport Code Arr Airport Name Arr City Code Arr City Name Arr State Code Arr State Name Arr Country Code Arr Country Name Arr Region Code Arr Region Name O&D Pair (Airport) O&D Pair (City) O&D Pair (State) O&D Pair (Country) O&D Pair (Region)	Capacity	Seats (Total) Available Seat Miles Available Seat Kilometers Available Ton Miles Available Ton Kilometers Payload Capacity
Schedule	Passenger/Cargo Int/Dom Flights Scheduled/Unscheduled Civil/Military Short/Long Haul (500 Mile intervals)	RPM/RTM	Revenue Passenger Miles Revenue Passenger Kilometers Revenue Ton Miles Revenue Ton Kilometers
Equipment	Equipment Type	Operations	Airborne (Minutes)

	Equipment Config DOT Equipment Group OAG Equipment Group		Average Block Time per Flight Completion Factor Percentage Airborne/Ramp Ramp to Ramp (Minutes) Departures Performed Departures Scheduled
Activity Type	Activity Type	Distance	Distance (NM) Distance (KM) Distance (SM)

8.2 T100 MARKET TRAFFIC REPORTS – DIMENSIONS AND METRICS

T100 MARKET			
Dimensions		Metrics	
Carrier	Carrier Code Carrier Name Domicile Carrier Country Domicile Carrier Region	Passengers & Freight	Passenger Local (Total) Freight Local (US Tons) Mail Local (US Tons) Freight & Mail Local (US Tons)
Origin & Destination	Dep Airport Code Dep Airport Name Dep City Code Dep City Name Dep State Code Dep State Name Dep Country Code Dep Country Name Dep Region Code Dep Region Name Arr Airport Code Arr Airport Name Arr City Code Arr City Name Arr State Code Arr State Name Arr Country Code Arr Country Name Arr Region Code Arr Region Name O&D Pair (Airport) O&D Pair (City) O&D Pair (State) O&D Pair (Country) O&D Pair (Region)		
Schedule	Passenger/Cargo Int/Dom Flights Scheduled/Unscheduled Civil/Military Short/Long Haul (500 Mile intervals)		
Activity Type	Activity Type		

8.3 O&D TRAFFIC REPORTS (DETAILED) – DIMENSIONS AND METRICS

O&D TRAFFIC REPORTS (DETAILED)			
Dimensions		Metrics	
Carrier	Reporting Carrier Code Reporting Carrier Name Operating Carrier Code by Coupon Operating Carrier Name by Coupon Ticketed Carrier Code by Coupon Ticketed Carrier Name by Coupon Participating Operating Carriers Code Participating Ticketed Carriers Code	Ticketed Revenue	Number of Passengers (Adjusted) Number of Passengers (Unadjusted) Total Revenue (US Dollars) (Adjusted) Total Revenue (US Dollars) (Unadjusted) Average Fare (US Dollars) Average Yield (US Cents) Individual Ticket Value (USDollars) RPMs (Adjusted) RPMs (Unadjusted) RPKs (Adjusted) RPKs (Unadjusted) Number of Records
Origin & Destination	Dep Airport Code Dep Airport Name Dep City Code Dep City Name Dep State Code Dep State Name Dep Country Code Dep Country Name Dep Region Code Dep Region Name Dep World Area Code Connecting Airport Code Connecting Airport Name Connecting City Code Connecting City Name Connecting State Code Connecting State Name Connecting Country Code Connecting Country Name Connecting Region Code Connecting Region Name Arr Airport Code Arr Airport Name Arr City Code Arr City Name Arr State Code Arr State Name Arr Country Code Arr Country Name Arr Region Code Arr Region Name Arr World Area Code O&D Pair (Airport) O&D Pair (City) O&D Pair (State) O&D Pair (Country) O&D Pair (Region) Passenger Itinerary	Distance	GCD (KM) GCD (NM) GCD (SM) Itinerary Circuit Distance (KM) Itinerary Circuit Distance (NM) Itinerary Circuit Distance (SM)

	Trip Qualifier US Gateway Code and Name Int/Dom		
Ticketed Revenue	Individual Ticket Value (US Dollars)		
Distance	Itinerary Circuit Distance (KM) Itinerary Circuit Distance (NM) Itinerary Circuit Distance (SM)		
Coupons	Coupon Count Fares by Coupon Frequent Flyer Indicator Operating Carrier Coupon Types Ticketed Carrier Coupon Types		

8.4 O&D TRAFFIC REPORTS (SUMMARY) – DIMENSIONS AND METRICS

O&D TRAFFIC REPORTS (SUMMARY)			
Dimensions		Metrics	
Carrier	Carrier Code Carrier Name	Ticketed Revenue	Number of Passengers (Adjusted) Number of Passengers (Unadjusted) Total Revenue (US Dollars) (Adjusted) Total Revenue (US Dollars) (Unadjusted) Average Fare (US Dollars) Average Yield (US Cents) RPMs (Adjusted) RPMs (Unadjusted) RPKs (Adjusted) RPKs (Unadjusted) Number of Records
Origin & Destination	Dep Airport Code Dep Airport Name Dep City Code Dep City Name Dep State Code Dep State Name Dep Country Code Dep Country Name Dep Region Code Dep Region Name Arr Airport Code Arr Airport Name Arr City Code Arr City Name Arr State Code Arr State Name Arr Country Code Arr Country Name Arr Region Code Arr Region Name O&D Pair (Airport) O&D Pair (City) O&D Pair (State) O&D Pair (Country) O&D Pair (Region) Int/Dom		

8.5 FINANCE REPORTS (FORM 41) - DIMENSIONS, METRICS & CATEGORIES

LARGE > \$20m Airlines		
B1 BALANCE SHEET		
Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Group Carrier Type Active/Inactive	Current Assets	Accounts Receivable Less: Allowance for Uncollectible Accounts Cash Notes and Accounts Receivable – Net Notes Receivable Other Current Assets Prepaid Items Short-term Investments Spare Parts and Supplies – Net Total Current Assets
	Investments and Special Funds	Investment in Associated Companies Other Investments and Receivables Special Funds Total Investments and Special Funds
	Operating Property and Equipment	Construction Work in Progress Land Leased Property Under Capital Leases Leased Property under Capital Leases: Accumulated Amortization Less: Allowances for Depreciation Investment in Associated Companies Equipment Purchase Deposits & Advance Payments Flight Equipment Ground Property and Equipment Property and Equipment – Net Total Operating Property and Equipment
	NonOperating Property and Equipment	Less: Allowance for Uncollectible Accounts Non-Operating Property and Equipment Total Non-operating Property and Equipment
	Other Assets	Long-Term Prepayments Other Assets and Deferred Charges Total Other Assets Unamortized Development and Pre-operating Costs
	Total Assets	Total Assets
	Current Liabilities	Accounts Payable: Others Accrued Interest Accrued Salaries, Wages Accrued Taxes Accrued Vacation Liability Air Traffic Liability Current Maturities of Long-term Debt Current Obligations Under Capital Leases Dividends Declared Notes Payable: Banks Notes Payable: Others Other Current Liabilities

		Total Current Liabilities Trade Accounts Payable
	NonCurrent Liabilities	Advances from Associated Companies Long-Term debt Non-Current Obligations Under Capital Leases Other Non-current Liabilities Pension Liability Total Non-current Liabilities
	Deferred Credits	Deferred Income Taxes Deferred Investment Tax Credits Other Deferred Credits Total Deferred Credits
	Stockholders' Equity	Additional Capital Invested Capital Stock: Common Shares Capital Stock: Preferred Shares Capital Stock: Common Shares Issued Net Stockholders' Equity Capital Stock: Preferred Shares Issued Retained Earnings Capital Stock: Subscribed and Unissued Cash Total Capital Stock Total Paid-in Capital Total Stockholders' Equity Less: Treasury Stock Shares
	Total Liabilities and Stockholders' Equity	Total Liabilities and Stockholders' Equity
	Financial Ratios	Flight Equipment/Total Assets Flight Equipment/Total Debt (Depreciation+Amortization)/Net Fixed Assets Cash and Related/Current Assets Current Assets/Current Liabilities Debt/Equity Net Fixed Assets/Total Assets Return on Assets – ROA – (Earnings/Total Assets) Return on Assets Before Taxes – ROABT – (EBT/Total Assets) Return on Equity Before Taxes – ROEBT – (EBT/Equity) Total Liabilities (System-wide) Earnings/ (Total Assets, Depreciation and Amortization Allowance Earnings Before Tax / (Total Assets, Depreciation and Amortization Allowance) Transport revenue/Flight Equipment Quick Assets/Current Liabilities

LARGE > \$20m Airlines

P1.2 Profit & Loss

Dimensions	Metrics	Categories
Carrier Code	Net Income	Net Income
Carrier Name	Operating profit & Loss	Operating Profit of Loss
Carrier Group	Operating revenues	Operating Revenues: Passenger – First Class
Carrier Type		Operating Revenues: Passenger - Coach

Carrier region Active/Inactive		Operating Revenues: Transport Revenues-Passenger Operating Revenues: Mail Operating Revenues: Property-Freight Operating Revenues: Property-Excess Passengers Operating Revenues: Property Operating Revenues: Charter-Passenger Operating Revenues: Charter-Property Operating Revenues: Charter Operating Revenues: Reservation Cancellation Operating Revenues: Miscellaneous Operating Operating Revenues: Public Service Revenues Operating Revenues: Transport-Related Revenues Total Operating revenues
	Operating Expenses	Operating Expenses: Flying Operations Operating Expenses: Maintenance Operating Expenses: Passenger Service Operating Expenses: Aircraft and Traffic Service Operating Expenses: Promotion and Sales Operating Expenses: Depreciation and Amortization Transport-related Expenses
	NonOperating Income and Expenses	Interest on Long-Term Debt and Capital Lease Other Interest Expenses Foreign Exchange Gains and Losses Nonoperating Income and Expenses Capital Gains and Losses -Operating Property Capital Gains and Losses – Other Other NonOperating Net Income and Expenses
	Income Before Income Tax	Income Before Income Taxes
	Income Taxes for Current Period	Income Taxes for Current Period Income Before Discontinued Operations, Extraordinary Items and Account Changes
	Discontinued Operations and Extraordinary Items	Discontinued Operations Extraordinary Items Income Taxes Applicable to Extraordinary Items
	Accounting Changes	Accounting Changes
	Financial Ratios	Passenger Revenues (Scheduled and Charter) Net Interest and Income Interest, Capital Gains and Exchange Income/Interest and Income Capital Gains and Losses Return on Revenue Before taxes – RORBT – (EBT/Operating Revenue) Return on Revenue – ROR – (Earning/Operating revenue) Operating Profit/Operating Revenue (EBIT/Operating Revenue) (Scheduled Passenger Revenue+Subsidy)/Operating Revenue (Charter Passenger and Freight revenue)/Operating Revenue Operating Expense/Available Seat Miles (Cents/ASM) (CASM) Operating Expense/Block Hour (Cents/Block Hour) Operating Expense/Revenue Passenger Miles (Cents/RPM) (Operating Expense+Nonoperating Income and Expense)/Available Seat Miles (Cents/ASM) (CASM) (Total Operating Expense-Fuel and Oil Expense)/Available Seat Miles (Cents/ASM) (CASM) Operating Expense+Nonoperating Income and Expense-Fuel Expense)/Available Seat Miles (Cents/ASM) (CASM) International First Class Passenger Yield (Cents/RPM) International Coach Passenger Yield (Cents/RPM)

		Scheduled Passenger Yield (Cents/RPM) Nonscheduled passenger Yield (Cents/RPM) Total Mail, Freight and Excess baggage Yield (Cents/RTM) Total Mail and Freight Yield (Cents/RTM) Flying Operations Expense: Other Aircraft Maintenance Expense: Total General Service and Administrative Expense Aircraft Operating Expense/Operating revenue Crew Cost/Transportation Revenue Crew Salaries/Transportation Revenue
	Network Ratios	Scheduled and Charter Passenger revenue/Revenue Passenger Miles (Cents/RPM) (Total Passenger Yield) Operating revenue/Block Hour (Cents/Block Hour) Passenger revenue/Available Seat Miles (Cents/ASM) (Total Passenger RASM) Break Even Load Factor

LARGE > \$20m Airlines

P5.1 Aircraft Operating Expenses (Carriers with Op Rev, \$100M)

Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Group Carrier Type Active/Inactive Equipment Group Equipment Type Equipment Flight Type Engine Group Equipment Range	Flying Operations – Less Rentals	Flying Operations: Pilot and Copilot Flying Operations: Aircraft Fuel and Oil Flying Operations: Other Total Flying Operations (Less Rentals)
	Maintenance	Maintenance – Flight Equipment
	Depreciation and Rental	Depreciation & Rental – Flight Equipment
	Direct Expense (Aircraft Operating Expense)	Total Direct Expenses
	Indirect Expense	Flight Attendant Expense Traffic Related Expense Departure Related Expense (station) Capacity Related Expense Total Indirect Expense
	Total Operating Expense	Total Operating Expense

LARGE > \$20m Airlines

P5.2 Aircraft Operating Expenses (Carriers with Op. Rev>\$100M)

Dimensions	Metrics	Categories
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Carrier Code Carrier Name Carrier Group Carrier Type Active/Inactive Equipment Group Equipment Type Equipment Flight Type Engine Group Equipment Range	Flying Operations	Aircraft Fuels Aircraft Interchange Charges (Flying Operations) Aircraft Oils Employee Benefits and Pensions Injuries, Loss and Damage Insurance Purchased-General Other Expenses Other Flight Personnel Other supplies Personnel Expenses Pilots and Copilots Professional and Technical Fees and Expenses Rentals Taxes – Other than Payroll Taxes-Payroll Total Flying Operations Trainees and Instructors
	Direct Maintenance – Flight Equipment	Aircraft Interchange Charges (Maintenance – Flight Equipment) Aircraft Engines Repairs Airframe Overhauls Deferred (Credit) Airframe and Other Flight Equipment Repairs Airworthiness Allowance Provisions – Aircraft Engines Airworthiness Allowance Provision – airframes Aircraft Engine Overhauls Deferred (Credit) Labor – Aircraft Engines Labor – Airframes Maintenance Materials – Aircraft Engines Maintenance Materials – Airframes Total Direct Maintenance – Flight Equipment
	Applied Maintenance Burden – Flight Equipment	Applied Maintenance Burden – Flight Equipment Total Flight Equipment Maintenance
	Net Obsolescence and Deterioration – Expendable Parts	Net Obsolescence and Deterioration – Expendable Parts
	Depreciation – Flight Equipment	Depreciation – Aircraft Engines Depreciation – Aircraft Engine Parts Depreciation – Airframe Parts Depreciation – Airframes Total Flight Equipment Depreciation Depreciation – Other Flight Equipment
	Amortization Flight Equipment	Amortization-Capital Leases – Flight. Equipment
	Expense of Interchange Aircraft	Flying Operations (Expense of Interchange Aircraft)
	Aircraft Operating Expense (Direct Operating Expense)	Total Aircraft Operating Expenses
	Other Depreciation and Amortization (Non—Flight Equipment)	Amortization – Developmental and Preoperating Expenses Amortization – Capital Leases – Other Property and Equipment Amortization – Other Intangibles Depreciation – General Ground Property Depreciation – Maintenance Equipment and Hangars
	Financial Metrics	Labor – Other Flight Equipment Maintenance (Expense of Interchange Aircraft) (Total Labor+Outside Labor+Materials)/Airborne Hour (Aircraft Maintenance) (Total Maintenance-Airworthiness Allowance and Overhauls

		Deferred)/Airborne Hour Airframe Labor/Airborne Hour Airframe Maintenance Expense/Block Hour Airframe Maintenance Materials/Airborne Hour Amortization: Capital Leases Applied Maintenance Burden/Airborne Hour Crew Cost/Available Seat Mile (Cents/ASM) (CASM) Crew Cost/Block Hour Depreciation and Amortization: Aircraft and Leases Employee Benefits and pensions Cost/Block Hour (Cents/Block Hour) Engine Labor/Airborne Hour Engine Maintenance Expense/Block Hour Engine Maintenance Materials/Airborne Hour Engine Outside Labor/Airborne Hour Fixed Cost/Departure Flying Operations Expense: Labor Fuel Cost (Price per Gallon) Fuel Cost/Block Hour Fuel Cost/Mile Fuels Cost/Available Seat Mile (Cents/ASM) (CASM) Maintenance Cost/Available Seat Mile (Cents/ASM) (CASM) Operating Cost/Departure Operating Cost/Mile Other Cost/Available Seat Mile (Cents/ASM) (CASM) Payroll Taxes Cost /Block Hour (Cents/Block Hour) Personnel Expenses/Block Hour (Cents/Block Hour) Total Cost/Available Seat Mile (Cents/ASM) (CASM) Total Labor/Airborne Hour Total Maintenance Expense Excluding Labor/Block Hour Total Maintenance Materials/Airborne Hour Trainees and Instructors Cost/Block Hour (Cents/Block Hour) Pilots and Copilots Cost/Block Hour (Cents/Block Hour)
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LARGE > \$20m Airlines		
P6 Operating Expenses (Carriers with Op Rev > \$20M)		
Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Group Carrier Type Carrier Region Active/Inactive	Salaries	Salaries: General Management Personnel Salaries: Flight Personnel Salaries: Maintenance Labour Salaries: Air Traffic and Handling Personnel Salaries: Other Personnel Total Salaries
	Related Fringe Benefits	Related Fringe Benefits: Personnel Expense Related Fringe Benefits: Employee Benefits and Pensions Related Fringe Benefits: Payroll Taxes Total Related Fringe Benefits
	Total Salaries and Related Fringe Benefits	Total Salaries and Related Fringe Benefits

	Materials Purchased	Materials Purchased: Aircraft Fuel and Oil Materials Purchased: Maintenance Material Materials Purchased: Passenger Food Materials Purchased: Other Materials Total Materials Purchased
	Services Purchased	Services Purchased: Advertising and Other Services Purchased: Communications Services Purchased: Insurance Services Purchased: Outside Flight Equip. Maint. Services Purchased: Traffic Commissions Passenger Services Purchased: Traffic Commissions Cargo Services Purchased: Other Services Total Services
	Landing Fees	Landing Fees
	Rentals	Rentals
	Depreciation and Amortization	Depreciation Amortization
	Other Operating Expenses	Other Operating Expenses
	Transport Related Expense	Transport Related Expense
	Total Operating Expense	Total Operating Expenses
	Financial Ratios	Aircraft Maintenance Expense: Other Operations Expense: Depreciation and Amortization Operations Expense: Materials Operations Expense: Miscellaneous

LARGE > \$20m Airlines		
P7 Operating Expenses (Carriers with Op Rev > \$1BN)		
Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Group Carrier Type Carrier Region Active/Inactive	Direct Operating Expense – Aircraft Operating Expense	Total Direct Operating Costs
	Indirect Operating Expense – Passenger Service Expense	Passenger Service Expense: Flight Attendant Expense Passenger Service Expense: Food Expense Passenger Service Expense: Other In-flight Expense Total Passenger Service Expense
	Indirect Operating Expense – Aircraft Servicing Expense	Aircraft Servicing Expense: Line Servicing Expense Aircraft Servicing Expense: Control Expense Aircraft Servicing Expense: Landing Fee Total Aircraft Servicing Expense
	Indirect Operating Expense – Traffic Servicing Expense	Traffic Servicing Expense: Directly Assignable to Passenger Traffic Servicing Expense: Directly Assignable to Baggage and Cargo Traffic Servicing Expense: Not Directly Assignable Total Traffic Servicing Expense
	Indirect Operating Expense – Reservation and Sales Expense	Reservation and Sales Expense: Directly Assignable to Passenger Reservation and Sales Expense: Directly Assignable to Baggage and Cargo Reservation and Sales Expense: Not Directly Assignable Total Reservation and Sales Expense
	Indirect Operating Expense – Advertising and Publicity	Advertising and Publicity Expense: Directly Assignable to Passenger

	Expense	Advertising and Publicity Expense Directly Assignable to Cargo Advertising and Publicity Expense: Institutional Advertising Expense Total Advertising and Publicity Expense
	Indirect Operating Expense – Depreciation Expense – Maintenance Equipment	Depreciation Expense – Maintenance Equipment
	Indirect Operating Expense – Amortization – Other than Flight Equipment	Amortization – Other than Flight Equipment
	Transport Related Expense	Transport Related Expense
	Total Operating Expense	Total Operating Expenses
	Other	Maintenance –Ground Property and Equipment Depreciation –Ground Property and Equipment Total Maintenance and Depreciation Maintenance–Ground Property and Equipment Total Servicing, Sales and General Operating Expenses
	Financial Ratios	Aircraft Maintenance Expense: Other Aircraft Maintenance Expense: Total General Service and Administrative Expense
	Indirect Operating Expense – General and Administrative Expense	General and Administrative Expense

LARGE > \$20m Airlines

P10 Detailed Monthly Employee Stats

Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Group Carrier Type Carrier Region Active/Inactive	Employees	General Management Personnel Pilots and Copilots Other Flight Personnel Flying Operations Passengers/General Services and Administration Maintenance Labor Aircraft and Traffic Handling Personnel Aircraft Control personnel Passenger Handling Personnel Cargo Handling Personnel Trainees and Instructors Record keeping and Statistical Personnel Traffic Solicitors Other Personnel Transport related Employees Total Employees General Services and Administration

LARGE > \$20m Airlines		
P1(a) Annual Employee Totals		
Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Group Carrier Type Active/Inactive	Employees	Number of Full-Time Employees Number of Part-Time Employees Total Employees

LARGE > \$20m Airlines		
P12(a) Fuel		
Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Group Carrier Type Carrier Region Active/Inactive Schedule Type Business Type	Fuel	Gallons Cost

SMALL/MEDIUM < \$20m Airlines		
B1.1 Balance Sheet		
Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Group Carrier Type Active/Inactive	Current Assets	Cash and Equivalents Notes and Accounts Receivable-Net Other Current Assets Total Current Assets
	Operating Property and Equipment	Less: Accumulated Amortization Less: Accumulated Depreciation Owned Property and Equipment Property and Equipment Obtained Under Capital Leases Total Property and Equipment
	Other Assets	Other Assets
	Total Assets	Total Assets
	Current Liabilities	Accrued Taxes Notes and Accounts Payable

		Other Current Liabilities Total Current Liabilities
	NonCurrent Liabilities	Long Term Debt Other Liabilities
	Deferred Credits	Deferred Credits
	Stockholders' Equity	Capital Stock: Common Shares Outstanding Capital Stock: Preferred Shares Outstanding Less: Treasury Stock Net Stockholders' Equity Other Paid-In Capital Retained Earnings Total Stockholders' Equity
	Total Liabilities and Stockholders' Equity	Total Liabilities and Stockholders' Equity

SMALL/MEDIUM < \$20m Airlines

P1.1 Profit and Loss

Dimensions	Metrics	Categories
Carrier Code	Net Income, Profit or Loss	Net Income
Carrier Name	Operating Profit or Loss	Operating Profit
Carrier Group	Operating Revenues	Scheduled Service Passenger Transport Revenue Scheduled Service Other Transport Revenue Non-scheduled Service Transport Revenue Public Service Transport-Related Operating Revenue Other Transport-Related Operating Revenue Total Operating Revenue
Carrier Type	Operating Expenses	Flying Operations Operating Expense Maintenance Operating Expense General and Administrative Operating Expense Owned Property and Equipment Depreciation and Amortization Leased Property and Equipment Depreciation and Amortization Transport-Related Operating Expense Total Operating Expense
Active/Inactive	NonOperating Income and Expenditure	NonOperating Interest Expense Other Non-Operating (Net) Income and Expense
	Income Taxes for Current Period	Income Tax
	Discontinued Ops., Extraordinary Items, or Accounting Changes	Discontinued Ops., Extraordinary Items, or Accounting Changes

SMALL/MEDIUM < \$20m Airlines		
P5.1 Aircraft Operating Expenses (Carriers with Op. Rev <\$20M)		
Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Group Carrier Type Active/Inactive	Flying Operations – Less Rentals	Flying Operations: Pilot and Copilot Flying Operations: Aircraft Fuel and Oil Flying Operations: Other Total Flying Operations (less Rentals)
Equipment Group	Maintenance	Maintenance – Flight Equipment
Equipment Type	Depreciation and Rental	Depreciation and Rental – Flight Equipment
Equipment Flight Type	Direct Expense (Aircraft Operating Expense)	Total Direct Expenses
Engine Group Equipment Range	Indirect Expense	Flight Attendant Expense Traffic Related Expense Departure Related Expense (Station) Capacity Related Expense Total Direct Expense
	Total Operating Expense	Total Operating Expense

SMALL/MEDIUM <\$20m Airlines		
P1(a) Annual Employee Totals		
Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Group Carrier Type Active/Inactive	Employees	Number of Full-Time Employees Number of Part-Time Employees Total Employees

8.6 TRAFFIC SUMMARY REPORTS (FORM 41) – DIMENSIONS AND METRICS

TRAFFIC SUMMARY TABLES – T1 AIRLINE TRAFFIC		
Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Region Carrier Group Carrier Type Active/Inactive Scheduled/Non-Scheduled Pax/Cargo Civilian/Military	Passengers	Revenue Passengers Enplaned Revenue Passenger-Miles NonRevenue Passenger-Miles Revenue Passenger-Miles (Coach) Revenue passenger-Miles (First Class)
	Capacity	Available Seat Miles Available Seat-Miles (Coach) Available Seat-Miles (First Class)
	Freight	Revenue Ton-Miles: Passenger Revenue Ton-Miles: US Mail Priority Revenue Ton-Miles: Foreign Mail Revenue Ton-Miles: Freight NonRevenue Ton-Miles: Available Ton-Miles:
	Aircraft	Revenue Aircraft Miles Scheduled Completed Revenue Aircraft Miles Flown Revenue Aircraft Departures Performed Revenue Aircraft Hours (Airborne) Revenue Aircraft Miles Scheduled Total Aircraft Hours (Airborne)
	Network Ratios	Average Number of Seats per Aircraft Average cargo Ton Miles per Departure Average Departures/Day (Scheduled) Average Passenger Trip Length (Miles) Average Passengers/Departure (Scheduled) Average Stage Length (Miles) Load Factor (Ton Miles) Miles Flown/Miles Scheduled Total Departures Average Revenue Passenger Miles/Day (Scheduled) Total Revenue Passengers Enplaned Mail Revenue Ton Miles (Scheduled) Total Mail and Freight Revenue Ton Miles (Scheduled)

TRAFFIC SUMMARY TABLES – T2 AIRCRAFT TRAFFIC		
Dimensions	Metrics	Categories
Carrier Code Carrier Name Carrier Region Carrier Group Carrier Type Active/Inactive	Passengers	Revenue Passenger-Miles
	Capacity	Available Ton-Miles Available Seat Miles
	Freight	Total Revenue Ton-Miles Total Mail Revenue Ton-Miles Total Freight Revenue Ton-Miles

Aircraft Configuration Equipment Type Equipment Group	Aircraft	Revenue Aircraft Departures Performed Revenue Aircraft Miles Flown Total NonRevenue Aircraft Hours (Airborne) Total Aircraft Hours (Airborne) Total Aircraft Days Assigned – Carrier Equipment Total Aircraft Days Assigned –Carrier Routes Total Aircraft Block Hours (Ramp-to-Ramp) Total Aircraft Fuels Issued (Gallons) Total Revenue Aircraft Hours (Airborne)
	Financial Ratios	Crew Cost/Available Seat Mile (Cents/ASM) (CASM) Crew Cost/Block Hour Pilots and Copilots cost/Block Hour (Cents/Block Hour) Employee Benefits and Pensions Cost/Block Hour (Cents/Block Hour) Payroll Taxes Cost/Block Hour (Cents/Block Hour) Personnel Expenses/Block Hour (Cents/Block Hour) Trainees and Instructors Cost/Block Hour (Cents/Block Hour) (Total Maintenance-Airworthiness Allowance and Overhauls Deferred)/ Airborne Hour Airframe Labor/Airborne Hour Airframe Maintenance/Block Hour Aircraft Maintenance Materials/Airborne Hour Applied Maintenance Burden/Airborne Hour Engine Labor/Airborne Hour Engine Maintenance Expense/Block Hour Engine Outside Labor/Airborne Hour Maintenance Cost/Available Seat Mile (Cents/ASM) (CASM) Total Labor/Airborne Hour Total Maintenance Expense Excluding Labor/Block Hour Total Maintenance Materials/Airborne Hour (Total Labor + Outside Labor + Materials) /Airborne Hour (Aircraft Maintenance) Fuel Cost (Price per Gallon) Fuel Cost/Block Hour Fuel Cost/Mile Fuels Cost/Available Seat Mile (Cents/ASM) (CASM) Operating Cost/Departure Operating Cost/Mile Other Cost/Available Seat Mile (Cents/ASM) (CASM) Total Cost/Available Seat Mile (Cents/ASM) (CASM) Fixed Cost/Departure
	Network Ratios	Flight Crew: Average Trip Distance Flight Crew: Average Utilization (Block Hours/Trip) Aircraft Utilization (Block Hours per Day) Aircraft Utilization (Revenue Block Hours) (Scheduled + NonScheduled) Average Daily Total Airborne Hours per Aircraft (Aircraft Utilization) Average Number of Aircraft in Service Average Number of Departures/Aircraft (Carrier routes) Average Number of Seats /Aircraft (Scheduled + Non Scheduled) Average Fuel/Available Seat Mile Average Fuel/Mile Average Trip Fuel Fuel Efficiency (Available Seat Mile) Fuel Issued per Block Hour Gallons/Departure Gallons/Total Block Hour

		Airborne Hours/Block Hours Available Seat Miles/Gallon Average Air speed Average Block Hours/Departure Average Block to Block Time per Departure Average Flight Hour Stage Average Total Seat Count Block Hour/Flight Hour Ratio (Scheduled + non Scheduled) Block Speed (MPH) Departures/Day (Scheduled) Effective Fleet Size (Carrier Routes) Load Factor (Nonscheduled) Load Factor (Scheduled) Quarterly Work Rate Available Seat Miles/Yr-m Scheduled Miles to Total Miles Ratio Seat Departures: Total (Scheduled + Nonscheduled) Segment Length (Miles) (Scheduled) Stage Length (Scheduled) Total Available Seat Miles (ASMs) Total Available Seat Miles/Block Hour Total Available Ton Miles (ATMs) Total Available Ton Miles/Block Hour Total Block Hours Trips/Day Nonscheduled Revenue Aircraft Miles Flown Revenue Block Hours (Derived) Revenue Flight Hour to Total Flight Hour Ratio Revenue Services Block Speed Average Daily Revenue Airborne Hours per Aircraft (Aircraft Utilization) Average Daily Revenue Block Hours per Aircraft (Aircraft Utilization) Revenue Passenger Miles/Fuel Gallon Passenger Load Factor Total Revenue Passenger Miles (RPMs) Total Revenue Passenger Miles/Block Hour Total Revenue Ton Miles (RTMs) Total Revenue Ton Miles/Block Hour
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TRAFFIC SUMMARY TABLES – T3 AIRPORT TRAFFIC	
Dimensions	Metrics
Carrier Code	Revenue Passengers Enplaned
Carrier Name	Revenue Aircraft Departures
Carrier Region	Total Departures Performed
Carrier Group	Total Freight
Carrier Type Active/Inactive	Total Mail
Aircraft Configuration Equipment Type	

Equipment Group	
Engine Group	
Airport Cd	
Airport Name	
Airport City Cd	
Airport City Name	
Airport State Cd	
Airport State Name	
Airport Country Cd	
Airport Country Name	
Scheduled/Non-Scheduled	