RITA *Bureau of Transportation Statistics*

U. S. DEPARTMENT OF TRANSPORTATION

Bureau of Transportation Statistics – Office of Airline Information

T-100 Traffic Reporting Guide

U.S. Department of Transportation

Research and Innovative Technology Administration

T-100 Traffic Reporting Guide

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T100 Traffic Reporting –

Overview

T he T-100 "Air Carrier Traffic and Capacity Data by Non-Stop Segment and On-Flight Market" actually contains 5 reports. Two are provided by the U. S. Air Carriers – Non-Stop Segment data and On-Flight Market data. As of October 2002, T-1, T-2 and T-3 reports are calculated using the carrier's segment and market data.

Non-stop Segment and On-flight Market reports are not interchangeable.

Non-stop Segment data are every revenue departure between two points and what is carried between two points on that aircraft, for each departure including passengers, freight, and mail. This includes diversions, flag stops, tech-stops, emergency landings, etc. Segment data are not flight number driven and are referred to as "transported data".

Note: If a carrier provides **all-cargo** service and sells a seat on an **all-cargo** configured aircraft, the service code "F" or "L" is used to identify that a passenger was on the aircraft. The carrier still reports the aircraft type as a "2" to signify the **all-cargo** aircraft.

On-flight Market data are passengers, freight, and mail enplaned between *those* two points regardless of the number of stops between the points. Market data are flight number driven. So, if your flight number changes, your market will terminate and a new market will begin. Market data are referred to as "enplanement data".

For one stop flights, the number of passengers reported would be reported the same for segment and market data.

Every passenger on a flight leaving an airport is a segment passenger, but some of these passengers may not be market passengers of that airport – if they boarded the flight at the up line airport.

System Market-Segment Comparisons

System Market data
can NOT be greater than System Segment data

The system market data MUST be less than or equal to your system segment data. This comparison is also true for origin airports. We DO NOT use origin and destination pairs to make this determination because for every segment origin and destination record, there may not be a corresponding market record with the same origin and destination, or there may be a corresponding market record with the same origin and destination but the information is greater than the segment data record.

If for any reason the market data are greater than the segment data for their entire system or at the origin airport the carrier will be contacted to correct the appropriate records.

Examples:

Flight # 1   JFK-ORD-LAX
Flight #2   JFK-LAX

Flight #1 Segments =   JFK-ORD (10 JFK-ORD, 5 JFK-LAX), and
                       ORD-LAX, (6 ORD-LAX)
Flight #1 Markets =   JFK-ORD = 10, ORD-LAX = 6, JFK-LAX = 5

Flight #2 Segment =   JFK-LAX (50 to LAX)
Flight #2 Market =   JFK-LAX = 50

The results of adding the totals by airport pairs are:

Segments:	*Markets:*
JFK-ORD= 15	JFK-ORD = 10
ORD-LAX = 11	**JFK-LAX = 55**
JFK-LAX = 50	ORD-LAX = 6

As you can see in the example above, the market pair data for JFK–LAX are greater than the segment pair data.

This shows why we use only the ORIGIN AIRPORT when validating the data. By using the origin airports only, we have a meaningful validation of the data.

Example:

JFK segment = 65
JFK market = 65

ORD segment = 11
ORD market = 6

By adding the **ORIGIN AIRPORT** for all like instances in both the segment and market data, we can verify that the data are reasonable.

If the totals for the market **ORIGIN AIRPORTS** are greater than the segment **ORIGIN AIRPORTS**, the carrier is contacted and asked to correct the appropriate records and/or fields.

*** Please Note ***

For information on File & Record Descriptions, Please refer to Chapter 8.

T100 Traffic Reporting –

Service Classes and Entity Reporting

Beginning with October 2002 T100 Traffic Data …

The Office of Airline Information collects Market and Segment data from reporting Carriers by the following Service Class codes:

- ❖ from U.S. & Foreign Carriers: **F, G, L, P**
- ❖ from U.S. Carriers: **N, R**

The regulations define the service classes to be reported as:

> **F** - Schedule Passenger Service
> (includes Freight/Mail in the Belly)
> **G** - Scheduled ALL Cargo Service
> (NO Passengers)
> **L** - Non-Scheduled Passenger Service
> (includes Freight/Mail in the Belly)
> **N** - Non-Scheduled Military Passenger Service by U.S. Carriers
> (includes Freight/Mail in the Belly)
> **P** - Non-Scheduled ALL Cargo Service
> (NO Passengers)
> **R** - Non-Scheduled Military ALL Cargo Service by U.S. Carriers
> (NO Passengers)

The following *U.S. Carrier* data products are created:

- ❖ **T1** - US Air Carriers Traffic Schedule Data

- ❖ **T2** - US Air Carriers Traffic & Capacity Data,
        summarized by Aircraft Type

- ❖ **T3** - US Air Carriers Airport Activity Statistics Data

OAI includes and/or calculates the following Service Classes in the T1, T2, and T3 products:

Z - ALL U.S. Carrier Services (K+V)
    (calculated for the T1 & T2)

  K - Scheduled U.S. Carrier Service (F+G)
        (calculated for the T1, T2 & T3)

      F - Schedule Passenger Service –
            includes Freight/Mail in the Belly (T1 & T2)
      G - Scheduled ALL Cargo Service –
            NO Passengers (T1 & T2)

  V - Non-Scheduled U.S. Carrier Service (L+N+P+R)
        (calculated for the T1, T2 & T3)

      L - Non-Scheduled Passenger Service –
            includes Freight/Mail in the Belly (T1)
      N - Non-Scheduled Military Passenger Service –
            includes Freight/Mail in the Belly (T1)
      P - Non-Scheduled ALL Cargo Service –
            NO Passengers (T1)
      R - Non-Scheduled Military ALL Cargo Service –
            NO Passengers (T1)

Filing Requirements for Scheduled Service

"Scheduled Service" is defined as …

Transport Service operated pursuant to a **Published Flight Schedule** - *advertised and available to the general public.*

Entity Reporting for Scheduled Service

Each Carrier is assigned a unique 5 character Entity Code. This code is assigned by the U.S. Department of Transportation's Office of Airline Information to denote a carrier's operating entity.

For Scheduled Service, the following reporting operating entities are assigned:

- ❖ DOMESTIC
- ❖ ATLANTIC
- ❖ LATIN
- ❖ PACIFIC

Carriers that operate scheduled service to and from Canada are to report this service under their Domestic Entity Code.

US   US   FOREIGN
POINT A-----------POINT B------------POINT C

Point A to Point B segment report as domestic
Point B to Point C segment report as international
Point A to Point B market report as domestic
Point A to Point C market report as international
Point B to Point C market report as international

Reporting Service Class Codes for Scheduled Service

Domestic:

"F" = Scheduled Passenger/Cargo Service
    Can include Freight/Mail in the belly

"G" = Scheduled ALL- Cargo Service
    Freight/Mail ONLY – NO Passengers

International - ATLANTIC, LATIN, PACFIC:

"F" = Scheduled Passenger/Cargo Service
    Can include Freight/Mail in the belly

"G" = Scheduled ALL- Cargo Service
    Freight/Mail ONLY – NO Passengers

From this reported scheduled data, OAI *calculates …*

Total Scheduled service: **"K"** = "F" + "G"

OAI also calculates …

Total Nonscheduled service: **"V"** = "L" + "N" + "P" + "R"
… and …
Total of all services: **"Z"** = "K" + "V"

The above calculated service classes can be found on the BTS website at
www.transtats.bts.gov.

Filing Requirements for Nonscheduled Service

"Nonscheduled Service" is defined as …

Revenue Flights, such as **Charter** *that are NOT operated in regular scheduled service.* **Charter** *service and* **Nonscheduled** *service are the same.*

Entity Reporting for Nonscheduled Service

Each Carrier is assigned a unique 5 character Entity Code. This code is assigned by the U.S. Department of Transportation's Office of Airline Information to denote a carrier's operating entity.

For Nonscheduled Service, the following reporting operating entities are assigned:

* ❖ DOMESTIC
* ❖ INTERNATIONAL

Charter/Nonscheduled carriers that operate to and from Canada are to report this service under their International Entity.

```
US                 US                  FOREIGN
POINT A-----------POINT B------------POINT C
```

Point A to Point B segment report as domestic
Point B to Point C segment report as international
Point A to Point B market report as domestic
Point A to Point C market report as international
Point B to Point C market report as international

NOTE:
If no passengers are deplaned at "B", the entire flight may be reported as international, especially if no one enplanes or deplanes at "B"; or, if passengers are enplaned at "A" and "B" and deplaned at "C". If the Carrier ONLY has a Domestic Entity, report under the Domestic Entity.

Reporting Service Class Codes for Nonscheduled Service

Domestic:

"L" = Nonscheduled Passenger/Cargo Service
     Can include Freight/Mail in the belly

"P" = Nonscheduled ALL – Cargo Service
     Freight/Mail ONLY – NO Passengers

International:

"L" = Nonscheduled Passenger/Cargo Service
     Can include Freight/Mail in the belly

"P" = Nonscheduled ALL – Cargo Service
     Freight/Mail ONLY – NO Passengers

From this reported nonscheduled *nonmilitary* data, along with nonscheduled Military service, OAI *calculates* …

Total Nonscheduled service: **"V"** = "L" + "N" + "P" + "R"

OAI also calculates …

Total Scheduled service: **"K"** = "F" + "G"
… and …
Total of all services: **"Z"** = "K" + "V"

The above calculated service classes can be found on the BTS website at www.transtats.bts.gov.

Filing Requirements for
Nonscheduled Service, Military

"Nonscheduled Service" is defined as …

Revenue Flights, such as **Charter** *that are NOT operated in regular scheduled service.* **Charter** *service and* **Nonscheduled** *service are the same.*

Entity Reporting for Nonscheduled Military Service

Each Carrier is assigned a unique 5 character Entity Code. This code is assigned by the U.S. Department of Transportation's Office of Airline Information to denote a carrier's operating entity.

For Nonscheduled Military Service, the following reporting operating entities are assigned:

- ❖ DOMESTIC
- ❖ INTERNATIONAL

Charter/Nonscheduled carriers that operate to and from Canada are to report this service under their International Entity.

```
US                 US                  FOREIGN
POINT A-----------POINT B------------POINT C
```

Point A to Point B segment report as domestic
Point B to Point C segment report as international
Point A to Point B market report as domestic
Point A to Point C market report as international
Point B to Point C market report as international

NOTE:
If no passengers are deplaned at "B", the entire flight may be reported as international, especially if no one enplanes or deplanes at "B"; or, if passengers are enplaned at "A" and "B" and deplaned at "C". If the Carrier ONLY has a Domestic Entity, report under the Domestic Entity.

Reporting Service Class Codes for Nonscheduled Service, Military

Domestic:

"N" = Nonscheduled Military Passenger/Cargo Service
  Can include Freight/Mail in the belly

"R" = Nonscheduled Military ALL – Cargo Service
  Freight/Mail ONLY – NO Passengers

International:

"N" = Nonscheduled Military Passenger/Cargo Service
  Can include Freight/Mail in the belly

"R" = Nonscheduled Military ALL – Cargo Service
  Freight/Mail ONLY – NO Passengers

From this reported nonscheduled Military data, along with nonscheduled *nonmilitary* service, OAI *calculates* …

Total Nonscheduled service: **"V"** = "L" + "N" + "P" + "R"

OAI also calculates …

Total Scheduled service: **"K"** = "F" + "G"
… and …
Total of all services: **"Z"** = "K" + "V"

The above calculated service classes can be found on the BTS website at www.transtats.bts.gov.

T100 Traffic Reporting –
Data Elements

Non-Stop Segment Data Elements

The following is a list of data elements required for segment reporting:

SCHEDULE CODE – Indicates the type of record ("S" = segment)

CARRIER ENTITY – A unique 5 digit code assigned by the DOT which denotes a carrier's operating entity

DATA DATE – YYYYMM

ORIGIN – 3 letter OAG airport code.

DESTINATION - 3 letter OAG airport code.

SERVICE CLASS

AIRCRAFT TYPE – Use DOT assigned aircraft codes, last digit denotes aircraft configuration.
>   1 = pax/cargo
>   2 = all cargo
>   3 = convertible/quick change
>   4 = amphibious/water landing

REVENUE AIRCRAFT DEPARTURES PERFORMED – Number of departures actually performed.

AVAILABLE CAPACITY/PAYLOAD – Aircraft payload capacity expressed in pounds. Please remember this includes, seating capacity plus belly space for freight/mail.

AVAILABLE SEATS – Aircraft seating capacity, (number of seats for sale).

REVENUE PASSENGERS TRANSPORTED – Total number of passengers transported over this segment.

REVENUE FREIGHT TRANSPORTED – Total pounds of freight transported over this segment.

REVENUE MAIL TRANSPORTED – Total pounds of mail transported over this segment.

DEPARTURES SCHEDULED – Number of departures scheduled for this segment per CRS or OAG.

> *Note: This field will be zero when reporting charter/nonscheduled service, since these departures are not scheduled.* **For Alaskan Air carriers this field will always be zero.**

RAMP TO RAMP/BLOCK HOURS - Reported in minutes.

AIRBORNE HOURS – Wheels off to wheels on, reported in minutes.

**** Reminder ****

Segment data are reported exactly how the aircraft flies and what is **transported** on that aircraft between two points. This is to include any diversions due to weather, maintenance, medical emergencies, any flag stops or tech-stops, etc.

NOTE: Segment data are additive; that is; segments are added together if they have the same data date, origin, destination, service class and aircraft type. This form is the source for the DOT to calculate RPM'S, ASM'S, RTM'S, ATM'S, ASM'S, Departures Performed, Passengers transported for the DOT, FAA, etc.

*** For Reporting File & Record Descriptions Refer to Chapter 8 ***

On-Flight Market Data Elements

The following is a list of data elements required for Market reporting:

SCHEDULE CODE – Indicates the type of record ("M" = market)

CARRIER ENTITY – A unique 5 digit entity code assigned by the DOT which denotes a carrier's operating entity.

DATA DATE – YYYYMM

ORIGIN – 3 letter OAG airport code.

DESTINATION – 3 letter OAG airport code.

SERVICE CLASS

REVENUE PASSENGERS IN MARKET – Total number of passengers enplaned at origin and deplaned at destination.

REVENUE FREIGHT IN MARKET – Total pounds of freight enplaned at origin and deplaned at destination.

REVENUE MAIL IN MARKET – Total pounds of mail enplaned at origin and deplaned at destination.

*** *Reminder* ***

On-flight Market data will report passengers, freight/mail enplaned between *those* two points. Market data are flight number driven. So, if your flight number changes, your market will terminate and a new market will begin. Market data are referred to as "enplanement data".

Market data are additive; that is; markets are added together if they have the same origin, destination and service class. (This means market data from all aircraft types; one stop and multiple stops flights can be added together.)

NOTE: This form is the source of "ENPLANEMENTS" used by the DOT, FAA, etc.

*** *For Reporting File & Record Descriptions Refer to Chapter 8* ***

T100 Traffic Reporting – Data Validation

The Airline Reporting & Data Information System

The Office of Airline Information (OAI) receives over **150** individual T100 submissions from reporting carriers each month. The data are entered into the "Airline Reporting and Data Information System (ARDIS) where it is validated. OAI reviews the T100 validation reports for any problems. OAI contacts the carriers when reporting problems are found and OAI will ask a carrier for a re-submission of the entire report. OAI is always available to offer assistance to carriers who are unsure about the reporting requirements.

OAI uses Monthly and quarterly T100 data, to generate various products that are distributed to other government agencies, and subscribers of the data. The data are also made available to the general public, over the internet at www.transtats.bts.gov.

Error Messages for Non-Stop Segment Data

The "No. of Error Records" shown on the sample Non-Stop Segment data validation report on the next page, is derived from the following list of edit checks. These checks are performed on every non-stop segment record. If one of these checks fails, a record is printed out with the error code printed above the corresponding data field. It does not necessarily mean that there is an error, but that individual attention must be given to this item to determine is any action is required.

1: RECORD TYPE (SCHEDULE CODE IS INCORRECT)
2: CARRIER ENTITY CODE IS NOT ON CARRIER DECODE FILE
3: DATE IS NOT EQUAL TO CONTROL DATE OR IS NOT NUMERIC
4: AIRPORT IS EITHER NOT ALPHABETIC OR NOT ON OAG-NAMES FILE
5: SERVICE CLASS IS NOT ON SERVICE CLASS FILE
6: AIRCRAFT TYPE IS INVALID
7: FIELD IS NONNUMERIC OR CONTAINS AN INVALID NUMBER
8: AVAILABLE CAPACITY LESS THAN WEIGHT TRANSPORTED
9: TRANSPORTED PASSENGERS EXCEEDS AVAILABLE SEATS FOR CLASS
10: AIRCRAFT HOURS RAMP TO RAMP NOT GREATER THAN AIRBORNE
11: SERVICE CLASS AND CABIN CONFIGURATION DO NOT AGREE
12: THERE IS PASSENGER INFORMATION IN AN ALL CARGO FLIGHT
13: CARGO FLIGHT HAS NO FREIGHT OR MAIL TRANSPORTED
14: REPORTED CAPACITY OF AIRCRAFT EXCEEDS VALUES FOR TYPE
15: TRANSPORTED WEIGHT EXCEEDS AVAILABLE CAPACITY
16: PASSENGER SERVICE CLASS AND AIRCRAFT CABIN CONFIGURATION DO NOT AGREE
17: AVAILABLE SEATS EQUALS ZERO FOR PASSENGER FLIGHT
18: TRANSPORTED PASSENGERS EQUALS ZERO FOR PASSENGER FLIGHT
19: CALCULATED AVAILABLE SEATS OUTSIDE OF TABLE VALUES
20: CALCULATED AIRCRAFT SPEED OUTSIDE OF TABLE VALUES
21: MORE THAN 1 VALID ENTRY FOR AIRPORT
22 SERVICE CLASS = F/L AND CONFIG = "2" CANNOT SELL MORE THAN 1 SEAT

Sample Validation Report for Non-Stop Segment Data

```
Segment Report
No. of Records: 409
No. of Error Records: 23

  33. S  06790  200311 ATL  ATL  F  6941  2       75438       348       0          0
                                                                        20
       156       0         0         0         0         2       138      80
  _____

  39. S  06790  200311 ATL  PHX  F  6941  37719   156         143       0          0
                                                                        20
       0         0         0         0         0         1       255     231
  _____

  44. S  06790  200311 BDL  BDL  P  7152  1       53454       0         0          0
                                                                        20
       0         0         0         0         0         0        10      10
  _____

 131. S  06790  200311 DFW  DFW  L  6171  1       30176       189       0          0
                                                                        20
       0         0         0         0         0         0         0       0
  _____
                                                    8
 132. S  06790  200311 DFW  IAH  L  6171  1       30176       189       0          0

       164       0         0         0         0         0        98      69
  _____
                                                    8
 147. S  06790  200311 HOU  PIT  L  6171  1       30176       170       0          0

       166       0         0         0         0         0       165     140
  _____
                                                    8
 172. S  06790  200311 LAS  CLE  L  6171  1       30176       170       0          0

       158       0         0         0         0         0       220     195
  _____

 173. S  06790  200311 LAS  LAS  F  6941  1       37719       174       0          0
                                                                        20
       0         0         0         0         0         1        10       0
  _____

 180. S  06790  200311 LAX  ATL  F  6941  226314  9432        6920      0          0
                                                                        20
       0         0         0         0         0        60     14314   12826
  _____
```

Error Messages for On-Flight Market Data

The "No. of Error Records" shown on the sample On-Flight Market data validation report here below, is derived from the following list of edit checks. These checks are performed on every on-flight market record. If one of these checks fails, a record is printed out with the error code printed above the corresponding data field. It does not necessarily mean that there is an error, but that individual attention must be given to this item to determine is any action is required.

1: RECORD TYPE (SCHEDULE CODE IS INCORRECT)
2: CARRIER ENTITY CODE IS NOT ON CARRIER DECODE FILE
3: DATE IS NOT EQUAL TO CONTROL DATE OR IS NOT NUMERIC
4: AIRPORT IS EITHER NOT ALPHABETIC OR NOT ON OAG-NAMES FILE
5: SERVICE CLASS IS NOT ON SERVICE CLASS FILE
6: FIELD IS NONNUMERIC OR CONTAINS AN INVALID NUMBER
7: THERE IS PASSENGER INFORMATION IN AN ALL CARGO FLIGHT
8: CARGO FLIGHT HAS NO FREIGHT OR MAIL TRANSPORTED
9: ENPLANED PASSENGERS EQUALS ZERO FOR PASSENGER FLIGHT

Sample Validation Report for On-Flight Market Data

```
Market Report
No. of Records: 303
No. of Error Records: 3

                         4
  23. M  06790  200311 ACY  ZZZ  L  112      0        0        0        0

                         4
 186. M  06790  200311 ORH  ZZZ  L  51       0        0        0        0

                         4
 257. M  06790  200311 ZZZ  ACY  L  193      0        0        0        0
```

T100 Traffic Reporting – Business Rules

Business Rules – Segment Data

In preparation for the validation process, the segment data, that is reported by the carriers, are reformatted and tab-delimited when copied to OAI's WORK directory.

Field Number	Description
1.	Schedule
2.	Carrier Code
3.	Entity
4.	Data Date (YearMonth)
5.	Origin Airport
6.	Destination Airport
7.	Service Class
8.	Aircraft (Aircraft Type + Cabin Configuration)[1]
9.	Rev. Departures performed (510)
10.	Available capacity payload (270)
11.	Available Passengers (310)
12.	*- First Class (kept for historic purposes only)*
13.	*- Coach Class (kept for historic purposes only)*
14.	Revenue Passengers Enplaned (130)
15.	*- First Class (kept for historic purposes only)*
16.	*- Coach Class (kept for historic purposes only)*
17.	Revenue Freight Transported (237)
18.	Revenue Mail Transported (239)
19.	Scheduled Departures (520)
20.	Revenue Hours – Ramp (630)
21.	Revenue Hours – Airborne (610)

[1] The Aircraft field is a four (4) digit field, the first three (3) digits are the Aircraft Type and last one is the Cabin Configuration.

Segment Data Checks:

1) RECORD TYPE (SCHEDULE CODE IS INCORRECT)

    If the schedule field is not = 'S'

2) CARRIER ENTITY CODE IS NOT ON CARRIER DECODE FILE

    If the Entity Code doesn't exist in the CARDECODE table, or doesn't match the entry in the CARDECODE table for the given Carrier Code, Year and Month

3) DATE IS NOT EQUAL TO CONTROL DATE OR IS NOT NUMERIC

    If the date in the row doesn't match the year and month being processed

4) AIRPORT IS EITHER NOT ALPHABETIC OR NOT ON OAG-NAMES FILE

    If either the Origin or Destination airports are not in the Airports table

5) SERVICE CLASS IS NOT ON SERVICE CLASS FILE

    If the Service Class field is not one of F, G, L, P, N, R, Q

6) AIRCRAFT TYPE IS INVALID

    If the Aircraft Type (the first three digits in the Aircraft field) doesn't exist in the ACTYPE table

7) FIELD IS NONNUMERIC OR CONTAINS AN INVALID NUMBER

    If the field, defined as numeric, contains a nonnumeric or negative number

8) AVAILABLE CAPACITY LESS THAN WEIGHT
   TRANSPORTED

   If Available capacity payload < Total Carried

   Total Carried = (Revenue Passengers Enplaned +
   Revenue Passengers Enplaned - First Class + Revenue
   Passengers Enplaned – Coach Class) * 200) + Revenue
   Freight Transported + Revenue Mail Transported

9) TRANSPORTED PASSENGERS EXCEEDS AVAILALBE
   SEATS FOR CLASS

   IF Service Class is 'F' OR 'L'
   AND
   Revenue Passengers Enplaned > Available Passengers
   OR
   Revenue Passengers Enplaned - First Class > Available
   Passengers - First Class
   OR
   Revenue Passengers Enplaned - Coach Class > Available
   Passengers - Coach Class

10) AIRCRAFT HOURS RAMP TO RAMP NOT GREATER
    THAN AIRBORNE

    If Revenue Hours – Airborne is greater than Revenue
    Hours – Ramp

11) SERVICE CLASS AND CABIN CONFIGURATION DO
    NOT AGREE

    If CabinConf is '1' OR '3' AND (Service Class is 'P' OR
    'Q')
    OR
    If Cabin Configuration is greater than '4' OR is equal to '0'

12) THERE IS PASSENGER INFORMATION IN AN ALL
    CARGO FLIGHT

If Total Passengers IS GREATER THAN '0' AND
Service Class is G, P, or Q
Total Passengers = Revenue Passengers Enplaned +
Revenue Passengers Enplaned – First Class + Revenue
Passengers Enplaned – Coach Class

13) CARGO FLIGHT HAS NO FREIGHT OR MAIL
TRANSPORTED

If Total Freight IS '0' AND Service Class is G, P, or Q
Total Freight = Revenue Freight Transported + Revenue
Mail Transported

14) REPORTED CAPACITY OF AIRCRAFT EXCEEDS
VALUES FOR TYPE

Capacity exceeds the maximum value obtained from the
Aircraft Type table (ACTYPE)

15) TRANSPORTED WEIGHT EXCEEDS AVAILABLE
CAPACITY

If Total Carried > Available capacity payload

Total Carried = (Revenue Passengers Enplaned +
Revenue Passengers Enplaned - First Class + Revenue
Passengers Enplaned – Coach Class) * 200) + Revenue
Freight Transported + Revenue Mail Transported

16) PASSENGER SERVICE CLASS AND AIRCRAFT CABIN
CONF. DO NOT AGREE

If the Service Class is F (Passenger), the Cabin Conf
cannot be 2

17) AVAILABLE SEATS EQUALS ZERO FOR PASSENGER
FLIGHT

For Service Class F, Available Seats cannot be zero.

18) TRANSPORTED PASSENGERS EQUALS ZERO FOR PASSENGER FLIGHT

For Service Class F, Transported Passengers cannot be zero.

19) CALCULATED AVAILABLE SEATS OUTSIDE OF TABLE VALUES

Available Seats / # of Departures is outside the range provided in the Aircraft Type table (ACTYPE)

20) CALCULATED AIRCRAFT SPEED OUTSIDE OF TABLE VALUES

If Speed is 125% GREATER THAN the speed in the ACTYPE table

If Revenue Hours – Airborne IS EQUAL TO 0 OR
   Rev. Departures performed IS EQUAL TO 0
THEN Speed = 0
ELSE
   Speed = Distance/ (Revenue Hours Airborne / (60 *
   Rev.   Departures performed))   # Distance /
   Airborne Min.

21) MORE THAN 1 VALID ENTRIES FOR AIRPORT

In the Airports table, there is more than 1 valid entry for a given airport.

22) SERVICE CLASS = F/L AND CONFIG = "2" CANNOT SELL MORE THAN 1 SEAT

If Service Class F/L and Cabin Configuration "2", #PAX must be less than or equal #Departures

Business Rules – Market Data

In preparation for the validation process, the market data, that is reported by the carriers, are reformatted and tab-delimited when copied to OAI's WORK directory.

Field Number	Description
1.	Schedule
2.	Carrier Code
3.	Carrier Entity (5 digit code)
4.	Data Date
5.	Origin Airport
6.	Destination Airport
7.	Service Class
8.	Passengers in Market (# of passengers enplaned & deplaned) (110)
9.	*- First Class (kept for historic purposes only)*
10.	*- Coach Class (kept for historic purposes only)*
11.	Freight in Market (217)
12.	Mail in Market (219)

Market Data Checks:

1) RECORD TYPE (SCHEDULE CODE IS INCORRECT)

   If the schedule field is not = 'M'

2) CARRIER ENTITY CODE IS NOT ON CARRIER DECODE FILE

   If the EntityCode doesn't exist in the Cardecode table, or doesn't match the entry in Cardecode for the given Carrier Code, Year and Month

3) DATE IS NOT EQUAL TO CONTROL DATE OR IS NOT NUMERIC

   If the date in the row doesn't match the year and month being processed

4) AIRPORT IS EITHER NOT ALPHABETIC OR NOT ON OAG-NAMES FILE

> If either the Origin or Destination airports are not in the Airports table

5) SERVICE CLASS IS NOT ON SERVICE CLASS FILE

> IF the Service Class field is not one of F, L, G, P, Q

6) FIELD IS NONNUMERIC OR CONTAINS AN INVALID NUMBER

> If the field contains a negative number

7) THERE IS PASSENGER INFORMATION IN AN ALL CARGO FLIGHT

> If Total Passengers IS GREATER THAN '0' AND Service Class is G, P, or Q

> Total Passengers = Passengers in Market + Passengers in Market – First Class + Passengers in Market – Coach Class

8) CARGO FLIGHT HAS NO FREIGHT OR MAIL TRANSPORTED

> If Total Freight IS '0' AND Service Class is G, P, or Q
> Total Freight = Freight in Market + Mail in Market

9) ENPLANED PASSENGERS EQUALS ZERO FOR PASSENGER FLIGHT

> For Service Class F, the Enplaned Passengers cannot be zero.

T100 Traffic Reporting – Terms and Definitions

Aircraft Capacity/Payload
Available capacity/payload is collected in pounds. It reflects the payload or total available capacity for any load applicable for the aircraft and for each segment.

Aircraft Type
A distinctive model as designated by the manufacturer. DOT uses a 3 digit code to identify aircraft types.

Airport Code
The official 3 letter OAG code issued for that airport

Airport-to-Airport distance
The great circle distance between airports, measured in statue miles, (5280 feet), Please use Dot official mileage.

Cargo/Freight
All traffic other than passengers or mail. Excess baggage is <u>not</u> cargo/freight.

Cargo/Freight Transported
Cargo/freight on board each segment.

Carrier Entity Code
A five digit code assigned by DOT that identifies the carrier and its geographic entity.

Departures Performed
A takeoff made at an airport

Departures Scheduled
A takeoff scheduled at an airport, as set forth in published schedules. Extra-sections are not departures scheduled but are counted as departures performed.

Deplaned
The number of passengers and pounds of freight and/or mail unloaded from and aircraft.

Domestic
Encompasses operations within and between the 50 States, DC, Puerto Rico, and the U. S. Virgin Islands.

Enplaned
The number of passengers, freight and/or mail boarded on an aircraft at the origin of the flight, boarding that flight for the first time.

Entity
Refers to the geographic location designation prescribed for operations. For scheduled carriers domestic, Latin, Atlantic, and pacific are used. Fro non-scheduled/charter carriers – domestic and international are used.

Extra Section
A flight, conducted as an integral part of scheduled service that has not been provided for in published schedules and is required for transportation of traffic that cannot be accommodated on a regularly scheduled flight.

Flight Stage/Segment
The operation of an aircraft from takeoff to landing.

Freight/Cargo
Property other than mail and passenger baggage transported by air.

Freight Ton Mile
One ton of freight transported one mile. Freight ton miles are computed by multiplying the aircraft mile flown by each segment by the tons transported on that segment.

Fuel Issued
Aircraft fuels issued, in U. S. gallons during the reporting period.

Hours, Airborne
The airborne hours of the aircraft computed from the moment an aircraft leaves the ground until it touches the ground at the end of the flight.

Hours, Ramp-to-Ramp
The aircraft hours computed from the moment the aircraft pushed back from the gate until the aircraft comes to a rest at the gate of the destination airport.

Interairport Distance
The distance between airports measures by great circle distance, in statue miles.

International
Segment stage when one or both terminals are outside the 50 states, DC, Puerto Rico and the U. S. Virgin Islands.

Load Factor, Revenue Passenger
The percent that revenue passenger – miles are of the available – seat miles.

Mail
All mail for which transportation by air is provided. Includes U. S. and foreign mail.

Market, On-Flight Market
On flight data represents the actual origin and destination of any traffic on flight, (where traffic is enplaned and deplaned). A flight can consist of one non-stop segment or multiple non-stop segments.

Mile
A statute mile, (5280 feet).

Mile flown, aircraft
The miles (computed in airport-to-airport distances) for each segment as actually completed.

Non-Scheduled Service
Revenue flights, such as charter flights that are not operated in regular service.

Passenger – Mile
One passenger transported 1 mile. Passenger – miles are computed by multiplying the aircraft miles flown on each segment by the number of passengers transported on that segment.

Passenger, Revenue
Person receiving air transportation from the air carrier for which remuneration is received by the air carrier. Air carriers' employees or others receiving air transportation against whom token service charges are levied are considered non-revenue passengers. Passengers traveling on Frequent Flyer awards are considered revenue passengers.

Passenger Revenue Ton Mile
One ton of revenue passenger weight (including all baggage) transported one mile. The passenger weight standard for both "Domestic" and "International" operation is 200 pounds.

Passenger Transported
Total passengers carried on a nonstop segment.

Schedule Service
Transport service operated pursuant to a published flight schedule, advertised and available to the public.

Seats Available
Installed seats in an aircraft offered for sale to the public by the carriers.

Seat – Miles, Available, Revenue
The aircraft miles flown on each segment multiplied by the number of seats available on that segment.

Section 418 Cargo Operations
The carriage, pursuant to section 418 of the Act, of property and/or mail in or between any State of the United States, the District of Columbia, Puerto Rico or the U. S. Virgin Islands.

Segment
Non-stop segment: The operation of an aircraft from takeoff to landing. (From origin to destination).

Service Class
Each service class is assigned a letter which breaks out scheduled from non-scheduled service and the type of service **(all cargo, passenger and military).**

System
The total operations of a carrier including both domestic and international operations.

Ton
A short ton **(2000 pounds)**.

Ton – Mile
One ton transported 1 mile. Ton-miles are computed by multiplying the aircraft miles flown on each segment by the number of tons transported on that segment.

Ton – mile, Freight
One tone of freight transported 1 mile. Freight-ton miles are computed by multiplying the weight freight **(in tons)** by the inter airport distance.

Ton – mile, Mail
One tone of mail transported 1 mile. Mail-ton miles are computed by multiplying the weight of mail transported **(in tons)** by the inter airport distance.

Ton – mile, Passenger
One ton of passenger weight **(including all baggage)** transported 1 mile. **(See weight, passenger)**

Ton – mile, Revenue
One ton of revenue traffic transported 1 mile. Ton miles are computed by multiplying the weight transported **(in tons)** by the inter airport distance.

Ton – mile, Available
The aircraft miles flown on each segment multiplied by the capacity available in tons for use on that segment.

Transported
The total number of passengers, freight and mail transported on a single non-stop segment, including that already on board the aircraft from previous segments.

Weight, Passenger
For the purpose of this part, a standard weight of 200 pounds per passenger **(including all baggage)** is used.

Wet Lease
Reported by the carrier in operational control of the aircraft; ie, who own the aircraft and crew.

T100 Traffic Reporting –

REPORTING T100 SEGMENT DATA –

NAMING CONVENTION and FILE TYPE

The Segment File naming convention is **"CC_SegYY_MM.csv"** where:

CC – Carrier Alpha Code
Seg – Indicates that file contains segment data
YY – Last two digits of the year
MM – MONTH

.csv – comma separated variable file type. *

> * The .csv extension indicates a comma separated variable file type – where commas separate each value in a record.

EXAMPLE:

AA_Seg02_11.csv = American Airlines, Segment data for November 2002

The first record listed below indicates each of the fields in the records that follow.
There are five data records in the sample file listing below.
Each data value is separated by a comma.

Example of a Segment file submission: **AA_Seg02_10.csv**

```
DATA TYPE, ENTITY CODE,
YEAR, MONTH,
ORIG AIRPORT, DEST AIRPORT,
SERVICE CLASS,
AIRCRAFTTYPE, CABINCONFIG,
DEPARTURESPERF,
AVAILABLEPAYLOAD, AVAILABLESEATS,
SEGPASSENGERS, SEG FREIGHT, SEG MAIL,
```

SCHED DEPARTURES, R TO R MINUTES, AIRB MINUTES

S,0A050,2002,10,DFW,IAD,F,614,1,1,44000,200,198,0,0,1,0,0

S,0A050,2002,10,SLC,JFK,F,625,1,1,69000,200,195,0,0,1,0,0

S,0A050,2002,10,ORD,SLC,F,627,1,1,110000,270,265,0,0,1,0,0

S,0A050,2002,10,DTW,IAD,F,614,1,1,44000,180,171,0,0,1,0,0

S,0A050,2002,10,LAA,LAX,F,622,1,1,55000,200,189,0,0,1,0,0

T100 SEGMENT FILE – RECORD LAYOUT AND FIELD DESCRIPTION

	FIELD NAME	FIELD LENGTH	DATA TYPE	DESCRIPTION
1	Data Type	1	Character	"S" is used for segment data
2	Entity Code	5	Character	A five-character code assigned to each air carrier that is used primarily for DOT reporting purposes. It is used to separate the Domestic, Atlantic, Latin America, and Pacific operations of each air carrier.
3	Year	4	Numeric	Format: CCYY = century and year
4	Month	2	Numeric	Format: MM: 01 = January … 12 = December
5	Origin Airport	3	Character	The three letter code identifying the airport. The airport codes are recognized by the International Air Transport Association (IATA), as used in all of the major airline reservation systems – OR – when there is no IATA code for an origin airport/point – contact the BTS/Office of Airline Information, and one will be assigned.
6	Destination Airport	3	Character	The three letter code identifying the airport. The airport codes are recognized by the International Air Transport Association (IATA), as used in all of the major airline reservation systems – OR – when there is no IATA code for the destination airport/point – contact the BTS/Office of Airline Information, and one will be assigned.
7	Service Class	1	Character	The Service Class Code refers to the class of service used. F Scheduled Passenger/Cargo Service G Scheduled All Cargo Service L Non-Scheduled Civilian Passenger/Cargo Service P Non-Scheduled Civilian All Cargo Service N Non-Scheduled Military Passenger/Cargo Service R Non-Scheduled Military All Cargo Service
8	Aircraft Type	3	Number	Type of aircraft used on the non-stop segment.
9	Cabin Configuration	1	Number	This code indicates the type of configuration: 1 - Passenger 2 – Cargo 3 – Passenger/Cargo 4 – Amphibious
10	Departures Performed	Up to 5	Number	The number of revenue aircraft departures performed in revenue scheduled service.
11	Available Payload	Up to 10	Number	Reflects total available capacity in pounds for passengers, freight, and mail applicable to the aircraft with which this flight is performed.
12	Available Seats	Up to 7	Number	Reflects the actual number of seats for sale, excluding those blocked for safety or operational reasons.
13	Segment Passengers	Up to 10	Number	Number of passengers originating (enplaning) the flight at the origin airport of the segment and terminating (deplaning) the flight at the destination airport of the segment.
14	Segment Freight	Up to 10	Number	Amount of Freight – in pounds – originating (enplaning) the flight at the origin airport of the segment and terminating (deplaning) the flight at the destination airport of the segment.
15	Segment Mail	Up to 10	Number	Amount of Mail – in pounds – originating (enplaning) the flight at the origin airport of the segment and terminating (deplaning) the flight at the destination airport of the segment.
16	Scheduled Departures	Up to 5	Number	The number of aircraft departures scheduled, whether or not actually performed.
17	Ramp to Ramp Minutes	Up to 10	Number	Is the total elapsed time computed from the moment the aircraft moves under its own power until it comes to rest at the next point of landing.
18	Airborne Time	Up to 10	Number	Is the elapsed time computed from the moment the aircraft leaves the ground until it touches down at the next point of landing.

REPORTING T100 MARKET DATA –

NAMING CONVENTION and FILE TYPE

The Market File naming convention is **"CC_MktYY_MM.csv"** where:

CC – Carrier Alpha Code
Mkt – Indicates that file contains Market data
YY – Last two digits of the year
MM – MONTH

.csv – comma separated variable file type. *

> * The .csv extension indicates a comma separated variable file type – where commas separate each value in a record.

EXAMPLE:

AA_Mkt02_11.csv = American Airlines, Market data for November 2002

The first record listed below indicates each of the fields in the records that follow.
There are five data records in the sample file listing below.
Each data value is separated by a comma.

Example of a Market file submission: **AA_Mkt02_10.csv**

```
DATA TYPE, ENTITY CODE,
YEAR, MONTH,
ORIG AIRPORT, DEST AIRPORT,
SERVICE CLASS,
MKT PAX, MKT FREIGHT, MKT MAIL


M,0A050,2002,10,JFK,IAD,F,0,0,0

M,0A050,2002,10,SLC,JFK,F,0,0,0

M,0A050,2002,10,ORD,SLC,F,0,0,0

M,0A050,2002,10,DTW,IAD,F,0,0,0

M,0A050,2002,10,LAA,LAX,F,0,0,0
```

T100 MARKET FILE – RECORD LAYOUT AND FIELD DESCRIPTION

	FIELD NAME	FIELD LENGTH	DATA TYPE	DESCRIPTION
1	Data Type	1	Character	"M" is used for segment data
2	Entity Code	5	Character	A five-character code assigned to each air carrier that is used primarily for DOT reporting purposes. It is used to separate the Domestic, Atlantic, Latin America, and Pacific operations of each air carrier.
3	Year	4	Numeric	Format: CCYY = century and year
4	Month	2	Numeric	Format: MM: 01 = January … 12 = December
5	Origin Airport	3	Character	The three letter code identifying the airport. The airport codes are recognized by the International Air Transport Association (IATA), as used in all of the major airline reservation systems – OR – when there is no IATA code for an origin airport/point – contact the BTS/Office of Airline Information, and one will be assigned.
6	Destination Airport	3	Character	The three letter code identifying the airport. The airport codes are recognized by the International Air Transport Association (IATA), as used in all of the major airline reservation systems – OR – when there is no IATA code for the destination airport/point – contact the BTS/Office of Airline Information, and one will be assigned.
7	Service Class	1	Character	The Service Class Code refers to the class of service used. F Scheduled Passenger/Cargo Service G Scheduled All Cargo Service L Non-Scheduled Civilian Passenger/Cargo Service P Non-Scheduled Civilian All Cargo Service N Non-Scheduled Military Passenger/Cargo Service R Non-Scheduled Military All Cargo Service
8	Market Passengers	Up to 7	Numeric	Number of Passengers originating (enplaning) the flight at the origin airport and terminating (deplaning) the flight at the destination airport.
9	Market Freight	Up to 7	Numeric	Amount of Freight – in pounds – originating (enplaning) the flight at the origin airport and terminating (deplaning) the flight at the destination airport.
10	Market Mail	Up to 7	Numeric	Amount of Mail – in pounds – originating (enplaning) the flight at the origin airport and terminating (deplaning) the flight at the destination airport.

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