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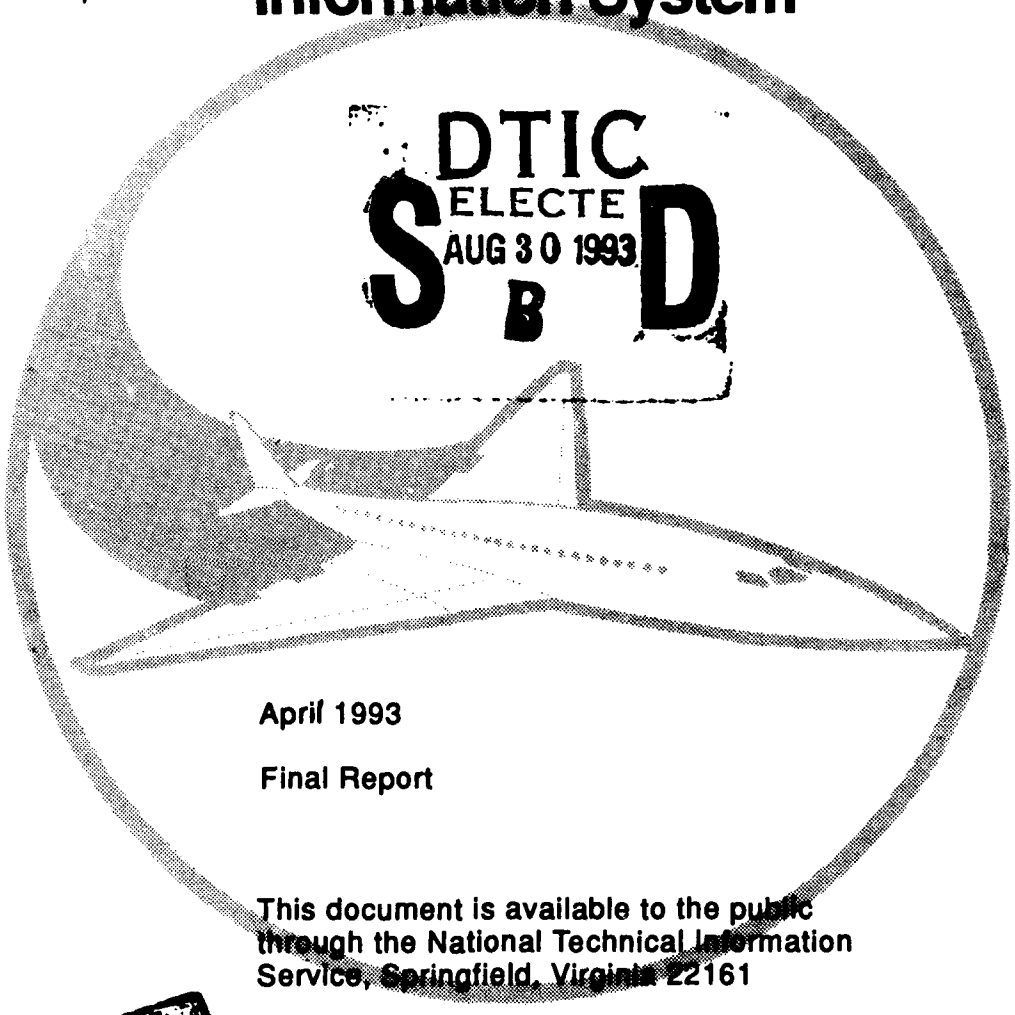
FAA Technical Center
Atlantic City International Airport
N.J. 08405

International Aircraft Operator Information System



April 1993

Final Report

U.S. Department of Transportation
Federal Aviation Administration

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16. Abstract

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The purpose of this program is to deliver to the Federal Aviation Administration (FAA) an automated information system which will provide useful aircraft information on all United States type certificated aircraft worldwide. The product is a system which is periodically updated and accessible to all FAA offices. The system makes use of commercially available data and other data from the public domain. From these data over 70 different tables were created and maintained. In order to identify aircraft, a unique coding system was created which extends the Aviation Safety Analysis System (ASAS) to all the world's aircraft. A similar coding system was created to identify and validate the names of the owners and operators of aircraft. In order for the FAA to use this information, a series of menu driven forms was created. FAA personnel can log into the system via modem to obtain and download a variety of reports. A User knowledgeable in Oracle can also prepare and download specialized reports without compromising the security of the system.

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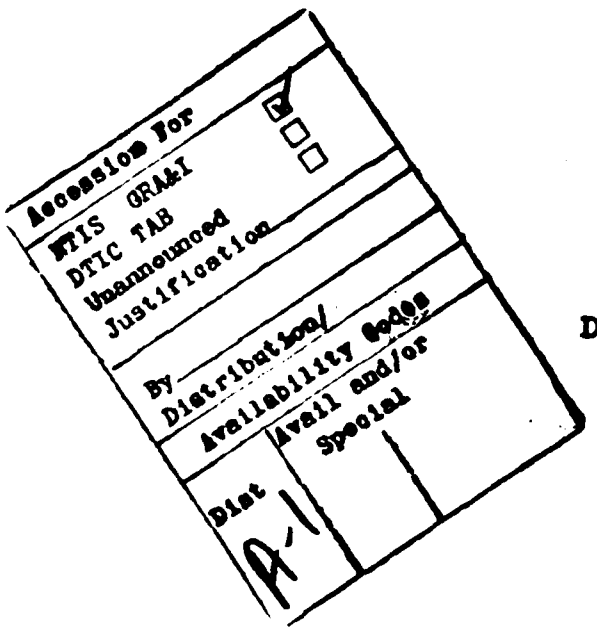


Executive Summary

BACKGROUND

The purpose of this program is to deliver an automated information system to the Federal Aviation Administration (FAA) which will provide useful aircraft operator information on all United States type certificated aircraft and airlines worldwide. The product is a system that is periodically updated and accessible from all FAA offices. This program was divided into two phases. During phase I the availability of data was determined and the feasibility of the program was studied. During phase II a prototype system was developed and operated for one year. An extension of one additional year for additional development is now under consideration. (See references 1, 2, and 3.)

DEVELOPMENT SUMMARY

The phase I study successfully demonstrated the feasibility of the concept. During Phase II a prototype system was developed. This system made use of commercially available data. Some of these data were purchased from data suppliers under contract and some came from the public domain, such as the Federal Information Processing System (FIPS) codes for cities and states, Aviation Safety Analysis System (ASAS) codes, and aircraft registration data. Normalized tables were created which included all of this information in a form usable by a relational database system (Oracle). Computer programs were written to update and manage these tables. Over 70 different tables were created and maintained with monthly updates.

To identify aircraft it was necessary to create a unique key for each aircraft. The FAA currently has a standard aircraft identification system for United States registered aircraft that is part of ASAS. This code consists of separate fields for aircraft manufacturer, model, and series. The key included in the prototype system uses the ASAS model code and the aircraft serial number. To make use of this system it was necessary to create similar codes for foreign aircraft using the same methodology as used to create the codes for United States aircraft. In addition, it was necessary to create cross-reference tables that converted the aircraft identification method used by each of the eight data suppliers into the extended ASAS system. To establish and preserve system integrity it was necessary to write computer programs to audit both the model codes and serial numbers. All of these processes are applied to each monthly update. A similar coding system is used to identify and validate the owners and operators of aircraft.

In order for the FAA to make use of this information, a series of menu driven forms were created. FAA personnel can log on to the system via modem and obtain a variety of screen reports which range from aircraft histories to address labels for the owners or operators of specific sets of aircraft. In some cases the reports are downloadable. In addition, a variety of specialized reports have been prepared as needed for individual FAA offices. A user knowledgeable in Oracle can also prepare and download specialized reports without compromising the security of the system.

In addition to aircraft identification and owner /operator information there is also a wide variety of other information available in the system. Among this other information are ASAS codes for engines, hour and cycle data, type certificate fields, and other standard modes of identification. All of these fields can be used as part of a selection process in a query of the database.

1. Information System Structures

From the beginning of the International Aircraft Operator Information System (IAOIS) program the underlying strategy has been to build a worldwide database of aircraft from data supplied by a number of vendors in such a way that no one vendor is a sole source or even a keystone supplier. The system is flexible enough that a supplier can drop out with little or no impact on the project and a new supplier can come on line with no restructuring of the IAOIS databases or programs. The underlying structure that allows this flexibility is described in the following paragraphs.

Vendors supply data as a complete export of their databases rather than converting their data to a rigidly defined structure. This policy lets the IAOIS analyst be in charge of all conversions and eliminates any question about the origin of the data. In addition this preserves the vendors data in its original form while creating a master file with processed data. In some cases, this policy allows access to all the data that the vendors carry on their files rather than the minimum amount of data called for in the initial request. These additional data structures have proved very useful during Phase II of this program.

All vendor data arrive in MS-DOS format on 3.5-inch floppy diskettes in either flat ASCII files or comma delimited ASCII files. Most of the vendors use some kind of compression program to decrease the number of diskettes. Custom procedures have been designed to decompress and/or append the vendor data into single DOS files and then transfer those files from a DOS client to the UNIX server. An Oracle product (SQLLOAD) loads the data into Oracle tables.

The FAA-ASAS classification system for aircraft and engines is the base structure for the IAOIS identification system. Because the original data supplied by the FAA aircraft registry encompassed only the US registered fleet, IAOIS analysts are continually modifying and appending these data to accommodate a global scope. A major effort at the beginning of this program was the creation of the cross-reference tables which converted the aircraft descriptions provided by the vendors to the ASAS description.

Analysts normalize the data using a series of cross-reference tables and conversion functions. Country and state fields are cross-referenced to FIPS codes. Engine and airframe codes are cross-referenced to ASAS codes. Fields such as LAST_UPDATE and MFR_DATE are converted to Oracle date format. Maintenance of these tables is ongoing and requires the expertise of an experienced aircraft database analyst. To bring a new vendor on-line requires a new set of cross-reference tables and takes 2 to 5 days to build.

Some of the vendors place their operator address data in separate tables that link to aircraft records. Other vendors include the address data in with the aircraft data. Those in the former category tend to have cleaner address data than those of the latter. Analysts designed several vendor specific functions to "clean up" the addresses and avoid duplicate entries for the

operators. Analysts use a set of 'C' programs (one for each vendor table) to convert the operator name into a condensed OP_CODE. The same algorithm is used on the data for all vendors in an attempt to build a single key from similar variations of an operator's name. A full description of the 'C' programs is in the Programming section of the Operations Manual. In some cases, this step also builds the operator/owner address table, if such data is not supplied by the vendor. When this process is applied, each vendor aircraft table is normalized and is linked by an operator key to an operator/owner table. A grouping code was developed for those operators for which the OP_CODE did not suffice to eliminate duplications. These grouping codes must be manualy linked.

A view is an Oracle structure which lets the user treat several linked Oracle tables as a single table - a virtual table. A set of views were made for each vendor database combines a vendor's data with the cross-reference tables into a virtual data record which matches the master aircraft table or the master operator table. Programs NA_010, NA_020 and NA_030 use these views to build the unique aircraft key and update the master tables.

Each vendor has a different system for storing the serial number of an aircraft. Some of them try to stay in the format that is stamped on the airframe and others use formats that are convenient for sorting and printing. A single 'C' program that dynamically adjusts to any vendor database is used to normalize serial numbers to a standard based on Model/Series as defined by the manufacturer. The normalized serial number is combined with the AIC_MODEL to build a unique NIAR_KEY (airframe key) for each aircraft. ***A correct NIAR_KEY is essential to the proper unique identification of an aircraft and is the most important ingredient in the information system.*** This process is evolutionary in nature due to changes in serial notations by the vendors and changes in model notations made by analysts. Audits, based on this key, allow analysts to advise the vendors about duplicate aircraft in their databases, even those that do not show up on a Registration number audit.

A series of audits is run against the normalized vendor data to insure that the newly built airframe keys and operator keys are synchronized with the master tables and with other vendors. All exceptions are handled before any updating of the Master table can take place.

Data to be included in the master table update, must have an entry in the special table (AS06). This table contains all the AIC_MODELS included in the master table as well as an entry for a prime vendor and secondary vendor. When it has been established the routines correctly convert a vendor's data for a particular model, that model is a ca8ndidate for being a prime or secondary data source. A primary source will always update an existing record in the master database and a secondary source only updates records not found in the primary source. Reports AS04_002 and AS04_003 show current prime and secondary vendors for the models. Using report AS04_002 the analyst can decide which vendor has the greatest number of a given model to use to update the master database. If a vendor drops out or a better source becomes available, then those entries in AS06 can be quickly changed and the *"new"* primary or secondary vendor will then update the master table when the update program (NA_020) runs.

A single dynamic SQL 'C' program is used to update data from any vendor table to the NA01 master table, using the views mentioned above and the data from AS06. Log files record update or insert activity (see program documentation for NA_020).

A single dynamic SQL 'C' program is used to update the Operator (NA11) table with new or changed data from the vendor operator table (see program documentation for NA_030).

A series of SQL scripts is used to delete aircraft and operators from the master tables that are not referenced in the vendor data.

Figures 1 and 2 show the number of aircraft and operators in the master tables by vendor as of September 1991 and August 1992. More detailed counts are shown in appendix A.

The differences in counts reflect experience gained from audits on sources of the best data.

	Sept. 1991	Aug. 1992
AD01	12583	16127
AD21		1969
AD41	9566	9916
AR01	589	39
BU01	7030	4294
BU21	712	188
FI01	1740	14002
JN01	5017	4253
LK01	10028	4897
sum	58265	62675

Figure 1. NA01 AIRCRAFT COUNTS BY VENDOR

	Sept. 1991	Aug. 1992
AD01	200	4770
AD21		1747
AR01	104	11
BU01		1127
FI01	2935	2699
IA01		1763
JN01	4588	2571
LK01	1686	2355
Sum	21585	23999

Figure 2. NA11 OPERATOR COUNTS BY VENDOR

2. Database Tables

This section describes the data tables which make up the ***International Aircraft Operator Information System.*** The Database Inventory includes 10 major vendor supplied tables and 70 plus other tables. A complete listing of table names is found in appendix B.

Table names follow a predictable pattern. The first aircraft table for a vendor is XX01 where XX is an abbreviation of the vendor name. If a vendor has multiple aircraft tables then the additional tables will be XX21, XX41, etc. All Aircraft XRF-tables (vendor/ASAS airframe cross-reference) are XX08, XX28, XX48, etc. All Engine XRF-tables (vendor/ASAS engine cross-reference) are XX07, XX27, XX47, etc. See appendix D for a complete view of linkage relationships between tables.

NA0X	NIAR master tables
AR0X	Aviation Research - aircraft database
AD0X	Aviation Data - aircraft database
AD2X	Aviation Data - Canadian - Australian Registry
AD4X	Aviation Data - business aircraft database
FI0X	Forecast International aircraft database
BU0X	Bucher Publications aircraft database
JN0X	Jetnet - business aircraft database
LK0X	Lundkvist Aviation aircraft database
RG0X	FAA registry tables from Airpac
AS0X	FAA ASAS database

Example of table names

The following indented table names are either analyst created or maintained.

		Avdata Inc.
AD01		Aircarrier fleet
	AD02	Country XRF
	AD03	ASAS (subset of NA01 for AD01)
	AD04	MFR XRF
	AD05	State XRF
	AD07	ASAS Engine XRF
	AD08	ASAS AIC XRF
	AD11	Operators and Owners

AD41		Avdata Business Jets
	AD22	Country XRF
	AD23	Mfr XRF
	AD27	ASAS Engine XRF
	AD28	ASAS AIC XRF
	AD31	Operators and Owners

Example of column definitions

Within like tables for each vendor, the column names are the same for the same kind of data. This means that data pertaining to a manufacture code are MFR_CODE in any of the 70 tables. See appendix C for a complete listing of all master table column names and their descriptions.

Table Name	Col Seq	Field Name	Data Type	Data Len	Description
AD01	1	OP_CODE	CHAR	30	Operator Code (link to AD11)
	2	OW_CODE	CHAR	30	Owner Code (link to AD11)
	3	NIAR_KEY	CHAR	22	Master Key (made from AIC_MODEL & NIAR_ CODE, link to NA01)
	4	MFR_NAME	CHAR	40	Aircraft Manufacturer Name
	5	MODEL_SERIES	CHAR	40	Aircraft Model Series (link to AD08)
	6	SERIAL	CHAR	15	Aircraft Serial Number (Construction Number)
	7	NIAR_CODE	CHAR	15	Normalized serial number made by NIAR staff
	8	REG	CHAR	15	Aircraft Registration Number assigned by Country of registry (link to RG01)
AD41	1	OP_CODE	CHAR	30	Operator Code (link to AD51)
	2	OW_CODE	CHAR	30	Owner Code (link to AD51)
	3	NIAR_KEY	CHAR	22	master Key (made from AIC_MODEL & NIAR_ CODE, link to NA01)
	4	MFR_NAME	CHAR	40	Aircraft Manufacturer Name
	5	MODEL_SERIES	CHAR	40	Aircraft Model Series (link to AD48)
	6	SERIAL	CHAR	15	Aircraft Serial Number (Construction Number)
	7	NIAR_CODE	CHAR	15	Normalized serial number made by NIAR staff
	8	REG	CHAR	15	Aircraft Registration Number assigned by Country of registry (link to RG01)

3. Special Programming

This section describes those special programs that carry out those functions needed for updates, audits, and database maintenance. All programs are written in C and use Oracle Pro-C to fetch and store data in Oracle tables. These programs can be compiled to access local Oracle environments (UNIX) and/or client server environments (MS-DOS to UNIX).

PROGRAM: NA-010.PC

The purpose of this program is to generate a NIAR_CODE and a NIAR_KEY for every aircraft in a vendor's main aircraft table. A NIAR_CODE is a normalized serial number and is used to build the NIAR_KEY. Each vendor takes creative license in the formatting of the serial number for an airframe; such as padding the left with zeros or spaces to make them sort correctly in their own reports. This program attempts to recreate the serial number in the format used by the manufacturer. The field LINE (construction number) is isolated from the serial number for certain aircraft models and vendor tables. Any date fields are converted to an ORACLE date format. A unique NIAR_KEY is built by concatenating the AIC_MODEL and the NIAR_CODE. By using a view (Oracle defined virtual structures) for each vendor master table, this program is able to dynamically reconfigure itself to any vendor table. This allows one program to update any vendor master table. This program reads data from the views that include data fields collected from vendor's main table (XX01, XX21, or XX41), cross reference tables (XX08, XX28, or XX48), and **AS01.** The view for each table must follow strict naming conventions and data structure so that the program can dynamically use the correct data set for a given table name. These views make it possible to leave vendor data unchanged while using those data to provide information to the master file in the rigid format required by the master file. For example a view for table AD01 would be NA_010_AD01 and is created with the following SQL code.

```
CREATE VIEW NA_010_AD01
 ( ROW_ID,NIAR_KEY,SERIAL,
   NIAR_CODE,AIC_MODEL,NIAR_DATE,MODEL_SERIES,REG,AIC_CODE, LINE)
AS SELECT A1.ROWID,NIAR_KEY,LTRIM(SERIAL),
   NIAR_CODE,AS01.AIC_MODEL,NIAR_DATE,A1.MODEL_SERIES,REG, A8.AIC_CODE, A1.LINE
FROM AD01 A1, AD08 A8, AS01
WHERE A1.MODEL_SERIES=A8.MODEL_SERIES AND A1.MFR_NAME = A8.MFR_NAME AND
   A8.AIC_CODE=AS01.AIC_CODE AND A1.NIAR_STATUS='A';
```

Each view would define the exact same data structure such as:

describe NA_010_AD01

Name	Type
ROW_ID	ROWID
NIAR_KEY	CHAR(22)
SERIAL	CHAR(15)
NIAR_CODE	CHAR(15)
AIC_MODEL	CHAR(13)
NIAR_DATE	DATE
MODEL_SERIES	CHAR(40)
REG	CHAR(15)
AIC_CODE	CHAR(26)
LINE	CHAR(6)

PROGRAM: NA-020.PC

This program reads data from **AS06** to find all models where a specified vendor is the prime or the secondary vendor. Then all airframe related data for those models are selected from the vendor master table and used to build or update the **NA01** table. By using a set of views (one for each vendor master table), this program is able to dynamicly reconfigure itself to any vendor table. This allows one program to do all updates to **NA01.** All views for this program follow the naming convention of NA_020_XXXX where XXXX is the table name. All views have the following data structure;

SQL> describe NA_020_AD01

Name	Type
ROW_ID	ROWID
NIAR_KEY	CHAR(22)
SERIAL	CHAR(15)
LINE	CHAR(6)
REG	CHAR(15)
OP_CODE	CHAR(30)
OW_CODE	CHAR(30)
NIAR_CODE	CHAR(15)
AIC_CODE	CHAR(26)
EIC_CODE	CHAR(20)
AIC_MODEL	CHAR(13)
LUPDATE	DATE
YEAR_MFR	CHAR(0)

In this case YEAR_MFR is a null value because table AD01 has no year_mfr field. It must, however, appear in the data structure.

PROGRAM: NA-030.PC

This program reads data from **AS06** to find all models where a specified vendor is the primary or the secondary vendor. Then all operator/owner data for those models are selected from the vendor master table and used to build or update the **NA11** record. By using a set of views (one for each vendor master table), this program is able to dynamicly reconfigure itself to any vendor table. This allows one program to do all updates to **NA11**. All views for this program follow the naming convention of NA_030_XXXX where XXXX is the table name. All views have the following data structure;

SQL> describe na_030_ad01

Name	Type
AIC_MODEL	CHAR(13)
NIAR_KEY	CHAR(22)
V_OP_CODE	CHAR(30)
V_OW_CODE	CHAR(30)
NIAR_ROWID	ROWID
NIAR_OP_CODE	CHAR(30)
NIAR_OW_CODE	CHAR(30)

PROGRAMS: AD11OPKY.PC, AD31OPKY.PC, AD51OPKY.PC, AR11OPKY.PC, BU11OPKY.PC, FI11OPKY.PC, JN11OPKY.PC, LK11OPKY.PC, RG11OPKY, IA01OPKY.PC

These programs build and update the operator code (OP_CODE) from the company name, city, and fips code from the address as supplied by the vendors. Although there is a single program for each major aircraft table, all programs use the same function (**naopcode**) to reduce the three fields to a single key. This subroutine eliminates tokens such as "INC","CO","LTD", ".", spaces, vowels and duplicate characters from the company name and the city name before concatenating the fields. The purpose of this process is to build a universal key for operators across the complete spectrum of vendor address data. If the operator name field was used as the key then the following examples would all be entered into the master operator table.

HILO AERO TAXI INC	TWOHOOTS	MT USA
Hilo Aero Taxi Inc	TWOHOOTS	MT United States
HILO AERO TAXI CORP.	TWOHOOTS	Montana US
HILO AERO TAXI INC.	TWO HOOTS	MONTANA, us
HILO AERO TAXI	Two Hoots	MT usa

However, the **naopcode** routine would convert each of the above examples to a key of **'HILOARTX-TWHTS-US'** and there would be only one entry in the master operator table. This process dramatically reduces the duplicate entries. Not all duplicates can be found in this way. Grouping codes have also been prepared to eliminate any further duplications. Multiple OP_CODEs with a single grouping code describe all the various ways that the name of an aircraft operator or owner can appear in a vendors table or the registry. Thus all these variations produce a single name and address for an aircraft owner or operator. This feature is essential for accurate fleet listing.

PROGRAM: RG_UPD.PC

This program reads AIRPAC's monthly updates table and updates the **RG01** master table. The circular updating records are located and set up in the appropriate sequences at the beginning of this program. Then the records that have a deletion indicator are processed first, then changes , and insertions last. This is the only vendor that sends monthly updates to their data file. All other vendors send complete replacement databases.

PROGRAM: DEFRAGMT.PC

This program automates the process of concatenating contiguous fragments of disk storage together so that they can be reused. Early on in this program, it was discovered that Oracle fragmented its private data spaces when tables went into secondary extents or there was a lot of drop/create activity. Several manual processes were developed to identify these fragmented spaces, and later it was found that contiguous data fragments could be rejoined when a new table was created. This program was written to automate the process of identifying contiguous spaces and then creating dummy tables of just the right size to join those spaces together. When all contiguous spaces have been joined, the dummy tables are deleted; leaving larger unfragmented spaces for future use. The CNTG_SPACE and SPACE_MAP tables are created by this program. The first table contains a list of free extents and calculates contiguous space and the second one shows the layout of used and free space in every table space. In addition, it analyzes the scatter of the occupied spaces and reports a list of possible large segment spaces after dropping or moving the objects.

PROGRAM: DIFFOPER.ORG

This is an OPERATOR AUDIT program. The purpose of this program is to locate the records whose operator codes are inconsistent among **AD01, AR01, BU01, FI01, LK01, AD41,** and **JN01** tables. A table named TEMP_OPER is created to hold the records whose operator codes are not consistent among tables. There are seven reports generated (ad01_opr.log, ar01_opr.log, bu01_opr.log, fi01_opr.log, lk01_opr.log, ad41_opr.log, and jn01_opr.log), one for each vendor's table used in this program. Each of these reports contains a list of inconsistent company names between the vendor's records and the selected master records.

PROGRAM: DIFFSER.ORG

This is a SERIAL AUDIT program. The purpose of this program is to loacate the records whose NIAR_CODEs are inconsistent among tables **AD01, AR01, BU01, FI01, LK01, AD21, AD41, BU21,** and **JN01**. The **RG01** records are also selected as a reference column for the purpose of auditing. A table named TEMP_SERIAL is created to hold the records whose NIAR_CODEs are not consistent among tables. There are nine reports generated (ad01_ser.log, r01_ser.log, bu01_ser.log, fi01_ser.log, lk01_ser.log, ad21_ser.log, ad41_ser.log, bu21_ser.log, jn01_ser.log), one for each vendor's table used in this program. Each of these reports contains a list of inconsistent SERIALs and NIAR_CODEs between the vendor's records and the selected master records. Duplicate registration numbers will be captured and included in each vendor's final report.

PROGRAM: MODELAUD.ORG

This program is designed to locate records whose AIC_MODELs are inconsistent among vendor **AD01, AD41, AR01, BU01, FI01, JN01, and LK01**. The AIC_MODEL is extracted from the NIAR_KEY which is the concatenation of AIC_MODEL and SERIAL_NUMBER. This program generates eight reports: ad01rpt.log, ad41rpt.log, ar01rpt.log, bu01rpt.log, fi01rpt.log, jn01rpt.log, lk01rpt.log, and model.log. Each of the xx01rpt.log contains a list of inconsistent AIC_MODEL and duplicate records and model.log shows the statistics of inconsistent and duplicate records.

4. Form Applications

PRODUCTION FORMS

This section describes the forms that have been prepared for FAA users and IOAIS analysts. ***The forms in A and B are the principal product delivered to FAA users.*** They are available via modem from pop-up menus.

A. Aircraft Forms:

1. **Histories** form displays owner, operator and registration history for any aircraft in the database.
2. **Citation histories** form shows the registration histories for Citation I and II only. This form is seperate from Histories because of the change in serial number when converting from dual pilot to single pilot configuration. The Citation is the only aircraft which follows this practice.
3. **Master aircraft file** form shows all the current information about any aircraft in the database.
4. **Operator fleet** provides a list of types and counts of aircraft in the fleet of an aircraft operator.
5. **Owner fleet** provides a list of types and counts of aircraft in the fleet of an aircraft owner.
6. **Operator master** form displays current operator address information and information on each aircraft in the operator's fleet.
7. **Country registration** form is useful for showing aircraft registered in one country and operated in another country. Information included are REG, AIC_CODE, and OPERATOR of the aircraft.
8. **Cycles hours** form is designed specifically to show aircraft flight hour, cycle, and daily utilization hour information.
9. **Registry** screen shows the current registry information of the aircraft registered in the United States. All aircraft except homebuilts are included.
10. **Operator address labels** form generates a file that captures aircraft operators' mailing addresses after being queried on any of: MFR_CODE, AIC_MODEL, AIC_MASTER, AIC_CODE, EIC_CODE, TC_CODE (for airframes), and REG.

B. Engine Forms:

1. **Operator address labels** form generates a file that captures aircraft operators' mailing addresses after being queried by any of: MFR_CODE, AIC_MODEL, AIC_MASTER, EIC_CODE, TC_CODE (for engines), and REG.
2. **Engine master** form shows current engine information such as ENGINE_MFR, ENGINE IDENTIFICATION CODE, and aircraft information like AIRCRAFT IDENTIFICATION CODE, REGISTRATION NUMBER, and OPERATOR.

C. Vendor/X-Refs:

1. The following forms: **AS01, AS21, AD01, AD08, AD28, AR01, BU01, BU11, BU21, BU08, BU28, FI01, FI08, JN01, JN08, LK01, LK08, and history** allow queries on aircraft data suppliers' database. They may have additional information to that found in the Master Aircraft and Engine forms.

ANALYST AND UTILITY FORMS

These forms are essential to the personnel who operate and maintain the information system. They are not normally available to the FAA users.

A. Avdata Utility Forms:

1. ***AD02, AD05, AD07, AD08, AD11, AD27, AD41, and AD48*** forms allow query on aircraft information supplied by AVDATA database and allow users to UPDATE, INSERT, or DELETE records. The naming convention of these forms are the same as table names, for example, *form **AD02*** displays information in table **AD02**.
2. ***AD08AS01*** form is used to help in resolving the AVDATA model/series to the **AIC_CODE** exception list. It only allows UPDATE on AIC_CODE field. The top portion of the screen displays information in table **AD08** and the other portion is a AS01-LOOK-UP screen. AS01-LOOK-UP displays information in table **AS01** and is used for information verification only
3. ***AD07AS21*** form is used to help in resolving the Avdata engine/series to the **EIC_CODE** exception list. It only allows UPDATE on EIC_CODE field. The top portion of the screen displays information in table **AD07** and the other portion is a AS21-LOOK-UP screen. AS21-LOOK-UP displays information in table **AS21** and is used for information verification only.
4. ***AD48AS01*** form is used to help in resolving the Avdata model/series to AIC_CODE exception list for **AD48** table. It only allows UPDATE on AIC_CODE field. The top portion of the screen displays information in table **AD48** and the other portion is a AS01-LOOK-UP screen. AS01-LOOK-UP displays information in table **AS01** and is used for information verification only.

B. Aviation Research Utility Forms:

1. ***AR01, AR02, AR07, AR08, and AR11*** forms allow query on aircraft information supplied by Aviation Research database and allow users to UPDATE, INSERT, or DELETE records. The naming conventions of these forms are table names, for example, *form **AR02*** displays information in table **AR02**.
2. ***AR08AS01*** form is used to help in resolving the **Aviation Research** model/series to the **AIC_CODE** exception list. It only allows UPDATE on AIC_CODE field. The top portion of the screen displays information in table **AR08** and the other portion is a AS01-LOOK-UP screen. AS01-LOOK-UP displays information in table **AS01** and is used for information verification only.

3. ***AR07AS21*** form is used to help in resolving the Aviation Research engine/series to the **EIC_CODE** exception list. It only allows UPDATE on AIC_CODE field. The top portionof the screen displays information in table **AD07** and the other portion is a AS21-LOOK-UP screen. AS21-LOOK-UP displays information in table **as21** and is used for information verification only.
4. ***AR11CITY*** form is used to help fill missing CITY field in table **AR11.** The lower left and right corners of the form are NA11-LOOK-UP and IATA-LOOK-UP screens. Both of these look-up screens provide conveniences in verifying city names.

C. Bucher Aviation Utility Forms:

1. ***BU01, BU02, BU07, BU08, BU11, BU22, AND BU28*** forms allow query on aircraft information supplied by BUCHER AVIATION database and allow users to UPDATE, INSERT, or DELETE records. The naming conventions of these forms are the same as table names. For example, *form **BU02*** displays information in table **BU02.**
2. ***BU08AS01*** form is used to help in resolving the Bucher Aviation model/series to the **AIC_CODE** exception list. It only allows UPDATE on AIC_CODE field. The top portion of the screen displays information in table **BU08** and the other portion is a AS01-LOOK-UP screen. AS01-LOOK-UP displays information in table **AS01** and is used for information verification only.
3. ***BU07AS21*** form is used to help in resolving the **Bucher Aviation** Engine/Series to the **EIC_CODE** exception list. It only allows UPDATE on AIC_CODE field. The top portion of the screen displays information in table **BU07** and the other portion is a AS21-LOOK-UP screen. AS21-LOOK-UP displays information in table **AS21** and is used for information verification only.

D. Forecast International Utility Forms:

1. ***FI01, FI02, FI05, FI07, FI08, and FI11*** forms allow query on aircraft information supplied by Forecast International database and allow users to UPDATE, INSERT, or DELETE records. The naming convention of these forms are the same as table names. For example, *form **FI02*** displays information in table **FI02**.
2. ***FI08AS01*** form is used to help in resolving the **Forecast International** model/series to the **AIC_CODE** exception list. It only allows UPDATE on AIC_CODE field. The top portion of the screen displays information in table **FI08** and the other portion is a AS01-LOOK-UP screen. AS01-LOOK-UP displays information in table **AS01** and is used for information verification only.
3. ***FI07AS21*** form is used to help in resolving the **Forecast International** engine/series to the **EIC_CODE** exception list. It only allows UPDATE on AIC_CODE field. The top portion of the screen displays information in table **FI07** and the other portion is a AS21-LOOK-UP screen. AS21-LOOK-UP displays information in table **AS21** and is used for information verification only.

E. Jenet Utility Forms:

1. ***JN01, JN02, and JN08*** forms allow query on aircraft information supplied by Jetnet database and allow users to UPDATE, INSERT, or DELETE records. The naming conventions of these forms are the same as table names. For example, *form* ***JN02*** displays information in table **JN02.**
2. ***JN08AS01*** form is used to help in resolving the **Jetnet** model/series to the **AIC_CODE** exception list. It only allows UPDATE on AIC_CODE field. The top portion of the screen displays information in table **JN08** and the other portion is a AS01-LOOK-UP screen. AS01-LOOK-UP displays information in table **AS01** and is used for information verification only.

F. Lundkvist Aviation Utility Forms:

1. ***LK01, LK02, LK05, LK07, and LK08*** forms allow query on aircraft information supplied by Lundkvist database and allow users to UPDATE, INSERT, or DELETE records. The naming convention of these forms are the same as table names. For example, *form* ***LK02*** displays information in table **LK02**.
2. ***LK08AS01*** form is used to help in resolving the **Lundkvist** model/series to the **AIC_CODE** exception list. It only allows UPDATE on AIC_CODE field. The top portion of the screen displays information in table **LK08** and the other portion is a AS01-LOOK-UP screen. AS01-LOOK-UP displays information in table **AS01** and is used for information verification only.
3. ***LK07AS21*** form is used to help in resolving the Lundkvist engine/series to the **EIC_CODE** exception list. It only allows UPDATE on EIC_CODE field. The top portion of the screen displays information in table **LK07** and the other portion is a AS21-LOOK-UP screen. AS21-LOOK-UP displays information in table **AS21** and is used for information verification only.

G. Airpac Inc. Utility Forms:

1. ***RG01 and RG08*** forms allow query on aircraft information supplied by Airpac database and allow users to UPDATE, INSERT, or DELETE records. The naming convention of these forms are the same as table names, for example, *form* ***RG01*** displays information in table **RG01.**

H. Federal Aviation Administration (FAA) Forms:

1. ***AS01, AS02, AS03, AS04, AS05, AS06, AS07, AS21, and AS22*** forms allow query on aircraft information supplied by FAA database and allow users to UPDATE, INSERT, or DELETE records. The naming conventions of these forms are the same as table names. For example, *form* ***AS01*** displays information in table **AS01.**

I. International Air Transport Association (IATA) Forms:

1. ***IA01 and IA02*** forms allow querys on aircraft information supplied by IATA database and allow users to UPDATE, INSERT, or DELETE records. The naming conventions

of these forms are the same as table names. For example, *form IA01* displays information in table IA01.

J. National Institute For Aviation Research (NIAR) Forms:

1. ***NA01, NA02, NA03, and NA11*** forms allow query on aircraft information supplied by National Institute For Aviation Research database and allow users to UPDATE, INSERT, or DELETE records. The naming convention of these forms are the same as table names. For example, *form NA01* displays information in table **NA01.**

K. General Utility Forms:

1. ***MULTIAIC*** form displays information of an aircraft model and its manufacturer from all the aircraft data suppliers as an aircraft registration number (known as REG) is entered in the designated box. This form does not allow UPDATE, INSERT, or DELETE.
2. ***MULTIEIC*** form displays information of an aircraft engine and its manufacturer from all the aircraft data suppliers as an aircraft registration number (known as REG) in the designated box. This form does not allow UPDATE, INSERT, or DELETE
3. ***DATA_DES*** form allows the user to enter OBJECT NAME (TABLE NAME) or COLUMN NAME and return with the description of the column name.
4. ***IA01_FIX*** form helps to group operators having the same ICAO_CODE.

L. Operator Audits Forms:

1. ***TEMP_OP_DIFF1*** form helps to prepare operator audit reports for **AD01**, **AR01, BU01, FI01,** and **LK01**
2. ***TEMP_OP_DIFF2*** form assists in the operator audits for **AD41** and **JN01**.
3. ***OP_CODE*** form helps to create grouping codes for **NA11** tables.

5. References

1. Hutchinson, John J., Frank H. Macheers, and Barbara K. Smith. "Evaluation of Existing Aircraft Operator Data Base." Report DOT/FAA/CT-90/18, August 1990.
2. Hutchinson, John J., Frank H. Macheers, Gary Ott, Raj Sunderraman, and John Ellis. "International Aircraft Operator Data Base Master Requirements and Implementation Plan." Report DOT/FAA/CT-90/17, August 1990.
3. Hutchinson, John J., and Barbara K. Smith. "International Aircraft Operator Information System, Test Plan." Report DOT/FAA/CT-91/18, November 1990.

6. Index

Appendix A

Aircraft Counts for Models in NA01

as of 9/1/92

The following data were selected from the master counts table (AS04).

Column descriptions

Secondary supplier indicator----------*
primary supplier indicator----------*
count in NA01 supplied by vendor-------*
total number of this model that a
vendor could supply----------*
short name for vendor -*
Aic_model *
mfr *

AEROSP AS-332	NA01	87	87	
AEROSP AS-332	FI01	84	84	*
AEROSP AS-332	BU01	78	3	*
AEROSP AS-332	AD21	2		

Table descriptions

NA01	NIAR master table
AR01	Aviation Research - airlines database
AD01	Aviation Data Services - aircarrier database
AD21	Aviation Data Services - Canadian and Australian registeries
AD41	Aviation Data Services - business aviation database
FI01	Forecast Aviation
BU01	Bucher Publications
JN01	Jetnet - business aviation database
LK01	Lundkvist Aviation

ACMNDR	ACMNDR-100	RG01	323		
ACMNDR	ACMNDR-100	AD21	136	41	*
ACMNDR	ACMNDR-100	NA01	41	41	
AEROSP	AS-332	NA01	87	87	
AEROSP	AS-332	FI01	84	84	*
AEROSP	AS-332	BU01	78	3	*
AEROSP	AS-332	AD21	2		
AEROSP	AS-350	NA01	691	691	
AEROSP	AS-350	BU01	641	126	*
AEROSP	AS-350	FI01	569	565	*
AEROSP	AS-355	NA01	187	187	
AEROSP	AS-355	BU01	172	51	*
AEROSP	AS-355	FI01	137	136	*
AEROSP	AS-355	RG01	28		
AEROSP	ATR-42	NA01	235	235	
AEROSP	ATR-42	LK01	235	9	*
AEROSP	ATR-42	AD01	226	226	*
AEROSP	ATR-42	BU01	225		
AEROSP	ATR-42	AR01	221		
AEROSP	ATR-42	FI01	219		
AEROSP	ATR-42	RG01	99		
AEROSP	ATR-42	AD21	14		
AEROSP	ATR-72	NA01	71	71	
AEROSP	ATR-72	LK01	71	71	*
AEROSP	ATR-72	BU01	68		*
AEROSP	ATR-72	AD01	65		
AEROSP	ATR-72	FI01	62		
AEROSP	ATR-72	AR01	56		
AEROSP	ATR-72	RG01	11		
AEROSP	SA-315	NA01	214	214	
AEROSP	SA-315	FI01	199	21	*
AEROSP	SA-315	BU01	193	193	*
AEROSP	SA-315	RG01	46		
AEROSP	SA-316	NA01	154	154	
AEROSP	SA-316	BU01	147	10	*
AEROSP	SA-316	FI01	144	144	*
AEROSP	SA-316	RG01	43		
AEROSP	SA-318	FI01	25		*
AEROSP	SA-318	BU01	24	4	*
AEROSP	SA-318	NA01	4	4	
AEROSP	SA-319	NA01	21	21	
AEROSP	SA-319	BU01	19	3	*
AEROSP	SA-319	FI01	18	18	*
AEROSP	SA-319	RG01	1		
AEROSP	SA-341	RG01	33		
AEROSP	SA-341	FI01	20		*
AEROSP	SA-360	NA01	15	15	
AEROSP	SA-360	FI01	15	3	*
AEROSP	SA-360	BU01	12	12	*
AEROSP	SA-365	NA01	163	163	
AEROSP	SA-365	BU01	156	56	*
AEROSP	SA-365	FI01	108	107	*
AEROSP	SA-365	RG01	28		
AEROSP	SE-210	NA01	72	72	
AEROSP	SE-210	AD01	58	58	*
AEROSP	SE-210	LK01	57	14	*
AEROSP	SE-210	FI01	55		
AEROSP	SE-210	BU01	42		
AEROSP	SE-210	BU21	6		
AEROSP	SE-210	RG01	3		
AEROSP	SN-601	AD41	60	29	*
AEROSP	SN-601	BU21	35		
AEROSP	SN-601	NA01	33	33	
AEROSP	SN-601	LK01	33	4	*
AEROSP	SN-601	FI01	20		
AEROSP	SN-601	BU01	20		
AEROSP	SN-601	AD01	4		
AEROSP	SN-601	RG01	2		
AGUSTA	AGUSTA-A109	NA01	93	93	
AGUSTA	AGUSTA-A109	BU01	75	22	*
AGUSTA	AGUSTA-A109	FI01	71	71	*
AGUSTA	AGUSTA-A109	RG01	47		
AGUSTA	AGUSTA-A109	AD21	11		
AIRBUS	A-300	NA01	375	375	
AIRBUS	A-300	LK01	375	7	*
AIRBUS	A-300	AD01	368	368	*
AIRBUS	A-300	FI01	367		
AIRBUS	A-300	AR01	366		
AIRBUS	A-300	BU01	347		
AIRBUS	A-300	RG01	75		
AIRBUS	A-300	AD21	8		
AIRBUS	A-300	BU21	2		
AIRBUS	A-310	NA01	227	227	
AIRBUS	A-310	LK01	227	17	*
AIRBUS	A-310	BU01	211		
AIRBUS	A-310	AR01	210		
AIRBUS	A-310	AD01	210	210	*
AIRBUS	A-310	FI01	208		
AIRBUS	A-310	RG01	21		
AIRBUS	A-310	AD21	3		
AIRBUS	A-310	AD41	1		
AIRBUS	A-320	NA01	353	353	
AIRBUS	A-320	LK01	353	37	*
AIRBUS	A-320	AD01	316	316	*
AIRBUS	A-320	FI01	311		
AIRBUS	A-320	AR01	305		
AIRBUS	A-320	BU01	304		
AIRBUS	A-320	RG01	59		
AIRBUS	A-320	AD21	42		
AIRBUS	A-340	NA01	4	4	
AIRBUS	A-340	LK01	4		*
AIRBUS	A-340	BU01	4	4	*
AIRBUS	A-340	AD01	3		
AMD	AMD-10	NA01	221	221	
AMD	AMD-10	LK01	218		
AMD	AMD-10	BU21	218		
AMD	AMD-10	JN01	217	8	*
AMD	AMD-10	AD41	213	213	*
AMD	AMD-10	RG01	107		
AMD	AMD-10	BU01	60		
AMD	AMD-10	FI01	46		
AMD	AMD-10	AD01	6		
AMD	AMD-10	AD21	4		
AMD	AMD-100	NA01	11	11	
AMD	AMD-100	FI01	10		
AMD	AMD-100	BU01	10	1	*
AMD	AMD-100	AD01	10	10	*
AMD	AMD-100	LK01	9		
AMD	AMD-100	RG01	1		
AMD	AMD-20	NA01	490	490	
AMD	AMD-20	LK01	486		
AMD	AMD-20	JN01	483	111	*
AMD	AMD-20	BU21	482		
AMD	AMD-20	AD41	431	379	*

AMD	AMD-20	RG01	190		
AMD	AMD-20	BU01	188		
AMD	AMD-20	FI01	181		
AMD	AMD-20	AD01	44		
AMD	AMD-20	AD21	25		
AMD	AMD-50	JN01	228	7	*
AMD	AMD-50	NA01	226	226	
AMD	AMD-50	BU21	226		
AMD	AMD-50	LK01	225		
AMD	AMD-50	AD41	219	221	*
AMD	AMD-50	RG01	134		
AMD	AMD-50	BU01	48		
AMD	AMD-50	FI01	44		
AMD	AMD-50	AD21	3		
AMD	AMD-50	AD01	1		
AMD	AMD-900	JN01	122	6	*
AMD	AMD-900	NA01	121	121	
AMD	AMD-900	BU21	119		
AMD	AMD-900	LK01	117		
AMD	AMD-900	AD41	115	115	*
AMD	AMD-900	RG01	56		
AMD	AMD-900	BU01	38		
AMD	AMD-900	FI01	27		
AMD	AMD-900	AD01	1		
ANTNOV	AN-10	NA01	59	59	
ANTNOV	AN-10	LK01	59	59	*
ANTNOV	AN-12	LK01	572	571	*
ANTNOV	AN-12	NA01	571	571	
ANTNOV	AN-12	AD01	176		
ANTNOV	AN-12	BU01	97		
ANTNOV	AN-12	FI01	84		
ANTNOV	AN-124	NA01	36	36	
ANTNOV	AN-124	LK01	36	36	*
ANTNOV	AN-124	AD01	32		
ANTNOV	AN-124	BU01	16		
ANTNOV	AN-124	FI01	10		
ANTNOV	AN-2	NA01	350	350	
ANTNOV	AN-2	BU01	350	350	*
ANTNOV	AN-2	FI01	81		
ANTNOV	AN-22	NA01	52	52	
ANTNOV	AN-22	AD01	52	52	*
ANTNOV	AN-22	FI01	5		
ANTNOV	AN-22	BU01	5		
ANTNOV	AN-24	LK01	676	675	*
ANTNOV	AN-24	NA01	675	675	
ANTNOV	AN-24	AD01	323		
ANTNOV	AN-24	FI01	192		
ANTNOV	AN-24	BU01	136		
ANTNOV	AN-26	NA01	420	420	
ANTNOV	AN-26	LK01	420	420	*
ANTNOV	AN-26	AD01	201		
ANTNOV	AN-26	FI01	108		
ANTNOV	AN-26	BU01	81		
ANTNOV	AN-28	NA01	24	24	
ANTNOV	AN-28	AD01	24	24	*
ANTNOV	AN-28	BU01	5		
ANTNOV	AN-28	FI01	3		
ANTNOV	AN-30	NA01	63	63	
ANTNOV	AN-30	LK01	63	63	*
ANTNOV	AN-30	AD01	43		
ANTNOV	AN-30	BU01	28		
ANTNOV	AN-30	FI01	20		
ANTNOV	AN-32	NA01	49	49	
ANTNOV	AN-32	LK01	49	49	*
ANTNOV	AN-32	AD01	13		
ANTNOV	AN-32	BU01	7		
ANTNOV	AN-32	FI01	2		
ANTNOV	AN-72	NA01	6	6	
ANTNOV	AN-72	AD01	6	6	*
ANTNOV	AN-8	NA01	6	6	
ANTNOV	AN-8	BU01	6	6	*
ARONCA	AR-11	RG01	1,042		
ARONCA	AR-11	NA01	205	205	
ARONCA	AR-11	AD21	205	205	*
ARONCA	AR-15	RG01	214		
ARONCA	AR-15	NA01	59	59	
ARONCA	AR-15	AD21	59	59	*
ARONCA	AR-65	RG01	178		
ARONCA	AR-65	NA01	17	17	
ARONCA	AR-65	AD21	17	17	*
ARONCA	AR-7	AD21	424	333	*
ARONCA	AR-7	NA01	265	265	
BAC	BA-JETSTM	NA01	359	359	
BAC	BA-JETSTM	LK01	359	5	*
BAC	BA-JETSTM	AD01	354	354	*
BAC	BA-JETSTM	AR01	350		
BAC	BA-JETSTM	FI01	301		
BAC	BA-JETSTM	BU01	296		
BAC	BA-JETSTM	RG01	275		
BAC	BA-JETSTM	AD21	58		
BAC	BA-JETSTM	AD41	7		
BAC	BAC-111	NA01	215	215	
BAC	BAC-111	AD01	210	210	*
BAC	BAC-111	LK01	205	5	*
BAC	BAC-111	AR01	204		
BAC	BAC-111	FI01	193		
BAC	BAC-111	BU01	180		
BAC	BAC-111	RG01	43		
BAC	BAC-111	BU21	43		
BAC	BAC-111	AD41	38		
BAE	BAE-125	NA01	459	459	
BAE	BAE-125	LK01	452	20	*
BAE	BAE-125	JN01	451		
BAE	BAE-125	BU21	445		
BAE	BAE-125	AD41	445	439	*
BAE	BAE-125	RG01	285		
BAE	BAE-125	BU01	79		
BAE	BAE-125	FI01	65		
BAE	BAE-125	AD21	23		
BAE	BAE-125	AD01	10		
BAE	BAE-146	NA01	210	210	
BAE	BAE-146	LK01	210	18	*
BAE	BAE-146	AD01	198		
BAE	BAE-146	AR01	194		
BAE	BAE-146	FI01	192	192	*
BAE	BAE-146	BU01	159		
BAE	BAE-146	RG01	53		
BAE	BAE-146	AD21	26		
BAE	BAE-146	BU21	7		
BAE	BAE-146	AD41	1		
BAE	BAE-ATP	NA01	51	51	
BAE	BAE-ATP	LK01	51	1	*
BAE	BAE-ATP	AD01	50	50	*

BAE	BAE-ATP	FI01	49		
BAE	BAE-ATP	AR01	48		
BAE	BAE-ATP	BU01	47		
BAE	BAE-ATP	RG01	10		
BAE	BAE-CONCRD	NA01	16	16	
BAE	BAE-CONCRD	LK01	15	15	*
BAE	BAE-CONCRD	BU01	14	1	*
BAE	BAE-CONCRD	AR01	14		
BAE	BAE-CONCRD	AD01	14		
BAE	BAE-CONCRD	FI01	13		
BAE	BAE-CONCRD	RG01	3		
BAG	BAG-PIONER	NA01	3	3	
BAG	BAG-PIONER	BU01	3	3	*
BAG	BAG-PIONER	FI01	2		
BEECH	BE-100	AD41	700	350	*
BEECH	BE-100	NA01	363	363	
BEECH	BE-100	JN01	354	13	*
BEECH	BE-100	RG01	226		
BEECH	BE-100	BU01	107		
BEECH	BE-100	FI01	106		
BEECH	BE-100	AD21	80		
BEECH	BE-100	AD01	27		
BEECH	BE-17	RG01	227		
BEECH	BE-17	NA01	11	11	
BEECH	BE-17	AD21	11	11	*
BEECH	BE-18	RG01	1,040		
BEECH	BE-18	NA01	273	273	
BEECH	BE-18	FI01	258	252	*
BEECH	BE-18	BU01	253	21	*
BEECH	BE-18	AD41	84		
BEECH	BE-18	AD21	70		
BEECH	BE-18	AD01	25		
BEECH	BE-19	RG01	388		
BEECH	BE-19	NA01	14	14	
BEECH	BE-19	AD21	14	14	*
BEECH	BE-1900	NA01	263	263	
BEECH	BE-1900	AD01	257	257	*
BEECH	BE-1900	LK01	256	6	*
BEECH	BE-1900	AR01	246		
BEECH	BE-1900	FI01	207		
BEECH	BE-1900	RG01	205		
BEECH	BE-1900	BU01	197		
BEECH	BE-1900	AD41	22		
BEECH	BE-1900	AD21	9		
BEECH	BE-200	AD41	2,187	32	*
BEECH	BE-200	NA01	1,543	1,543	
BEECH	BE-200	JN01	1,512	1,512	*
BEECH	BE-200	LK01	1,382		
BEECH	BE-200	RG01	819		
BEECH	BE-200	BU01	408		
BEECH	BE-200	FI01	364		
BEECH	BE-200	AD01	100		
BEECH	BE-200	AD21	91		
BEECH	BE-2000	AD41	27	23	*
BEECH	BE-2000	NA01	26	26	
BEECH	BE-2000	JN01	26	3	*
BEECH	BE-2000	RG01	23		
BEECH	BE-300	JN01	322		
BEECH	BE-300	NA01	316	316	
BEECH	BE-300	LK01	312	17	*
BEECH	BE-300	AD41	302	299	*
BEECH	BE-300	RG01	225		
BEECH	BE-300	BU01	45		
BEECH	BE-300	FI01	31		
BEECH	BE-300	AD21	4		
BEECH	BE-300	AD01	2		
BEECH	BE-33	RG01	1,227		
BEECH	BE-33	NA01	67	67	
BEECH	BE-33	AD21	42	42	*
BEECH	BE-33	FI01	21	21	*
BEECH	BE-33	BU01	16	4	
BEECH	BE-35	RG01	8,031		
BEECH	BE-35	NA01	274	274	
BEECH	BE-35	AD21	262	253	*
BEECH	BE-35	BU01	18	18	*
BEECH	BE-35	FI01	17	3	
BEECH	BE-36	RG01	2,600		
BEECH	BE-36	NA01	186	186	
BEECH	BE-36	AD21	142	134	*
BEECH	BE-36	BU01	49	49	*
BEECH	BE-36	FI01	42	3	
BEECH	BE-400	LK01	99		
BEECH	BE-400	JN01	99	4	*
BEECH	BE-400	NA01	98	98	
BEECH	BE-400	BU21	96		
BEECH	BE-400	AD41	95	94	*
BEECH	BE-400	RG01	64		
BEECH	BE-400	BU01	10		
BEECH	BE-400	FI01	2		
BEECH	BE-400	AD01	1		
BEECH	BE-45	RG01	363		
BEECH	BE-45	NA01	3	3	
BEECH	BE-45	AD21	3	3	*
BEECH	BE-45	FI01	1		
BEECH	BE-45	BU01	1		
BEECH	BE-50	RG01	411		
BEECH	BE-50	NA01	16	16	
BEECH	BE-50	BU01	13	4	*
BEECH	BE-50	FI01	12	12	*
BEECH	BE-50	AD21	10		
BEECH	BE-56	RG01	65		
BEECH	BE-56	NA01	7	7	
BEECH	BE-56	BU01	7	1	*
BEECH	BE-56	FI01	6	6	*
BEECH	BE-56	AD21	3		
BEECH	BE-58	RG01	1,579		
BEECH	BE-58	NA01	303	303	
BEECH	BE-58	BU01	180	180	*
BEECH	BE-58	FI01	166	24	
BEECH	BE-58	AD21	146	99	*
BEECH	BE-60	RG01	418		
BEECH	BE-60	NA01	25	25	
BEECH	BE-60	AD21	20	16	*
BEECH	BE-60	BU01	9	9	*
BEECH	BE-60	FI01	6		
BEECH	BE-70	NA01	2	2	
BEECH	BE-70	FI01	2	2	
BEECH	BE-76	RG01	279		
BEECH	BE-76	NA01	77	77	
BEECH	BE-76	AD21	64	54	*
BEECH	BE-76	BU01	21	21	*
BEECH	BE-76	FI01	20	2	
BEECH	BE-77	RG01	232		
BEECH	BE-77	NA01	22	22	
BEECH	BE-77	AD21	22	22	*

BEECH	BE-80	RG01	215		
BEECH	BE-80	NA01	93	93	
BEECH	BE-80	FI01	73	6	
BEECH	BE-80	BU01	70	70	*
BEECH	BE-80	AD21	36	17	*
BEECH	BE-90	AD41	3,466	92	*
BEECH	BE-90	NA01	1,806	1,806	
BEECH	BE-90	JN01	1,716	1,716	*
BEECH	BE-90	RG01	1,170		
BEECH	BE-90	BU01	237		
BEECH	BE-90	FI01	225		
BEECH	BE-90	AD21	42		
BEECH	BE-90	AD01	30		
BEECH	BE-95	RG01	2,748		
BEECH	BE-95	NA01	336	336	
BEECH	BE-95	AD21	207	152	*
BEECH	BE-95	FI01	168	17	
BEECH	BE-95	BU01	167	167	*
BEECH	BE-95	AD41	4		
BEECH	BE-99	NA01	209	209	
BEECH	BE-99	LK01	207	25	*
BEECH	BE-99	AD01	184	184	*
BEECH	BE-99	FI01	149		
BEECH	BE-99	RG01	132		
BEECH	BE-99	BU01	114		
BEECH	BE-99	AD21	26		
BEECH	BE-99	AD41	10		
BELL	BHT-204	RG01	221		
BELL	BHT-204	NA01	136	136	
BELL	BHT-204	BU01	121	27	*
BELL	BHT-204	FI01	109	109	*
BELL	BHT-204	AD21	28		
BELL	BHT-205	RG01	104		
BELL	BHT-205	NA01	95	95	
BELL	BHT-205	FI01	90	90	*
BELL	BHT-205	BU01	86	5	*
BELL	BHT-205	AD21	50		
BELL	BHT-206	NA01	2,265	2,265	
BELL	BHT-206	BU01	2,056	266	*
BELL	BHT-206	RG01	2,036		
BELL	BHT-206	FI01	2,001	1,999	*
BELL	BHT-206	AD21	1,401		
BELL	BHT-212	NA01	357	357	
BELL	BHT-212	BU01	338	58	*
BELL	BHT-212	FI01	300	299	*
BELL	BHT-212	RG01	124		
BELL	BHT-212	AD21	59		
BELL	BHT-214	NA01	39	39	
BELL	BHT-214	FI01	35	34	*
BELL	BHT-214	BU01	34	5	*
BELL	BHT-214	RG01	25		
BELL	BHT-214	AD21	4		
BELL	BHT-222	RG01	83		
BELL	BHT-222	NA01	56	56	
BELL	BHT-222	BU01	46	14	*
BELL	BHT-222	FI01	43	42	*
BELL	BHT-222	AD21	15		
BELL	BHT-412	NA01	112	112	
BELL	BHT-412	BU01	106	23	*
BELL	BHT-412	RG01	102		
BELL	BHT-412	FI01	93	89	*
BELL	BHT-412	AD21	13		
BELL	BHT-47	RG01	1,385		
BELL	BHT-47	NA01	141	141	
BELL	BHT-47	AD21	132	117	*
BELL	BHT-47	FI01	24	24	*
BLANCA	BL-1413	RG01	307		
BLANCA	BL-1413	NA01	18	18	
BLANCA	BL-1413	AD21	18	18	*
BLANCA	BL-1419	RG01	239		
BLANCA	BL-1419	NA01	15	15	
BLANCA	BL-1419	AD21	15	15	*
BLANCA	BL-17	RG01	1,099		
BLANCA	BL-17	NA01	31	31	
BLANCA	BL-17	AD21	31	31	*
BLANCA	BL-7	RG01	4,527		
BLANCA	BL-7	AD21	650	18	*
BLANCA	BL-7	NA01	9	9	
BNORM	BN-2	NA01	935	935	
BNORM	BN-2	LK01	921	513	*
BNORM	BN-2	FI01	424	422	*
BNORM	BN-2	BU01	415		
BNORM	BN-2	RG01	101		
BNORM	BN-2	AD41	23		
BNORM	BN-2	AD01	21		
BNORM	BN-2AMK3	NA01	73	73	
BNORM	BN-2AMK3	LK01	71	71	*
BNORM	BN-2AMK3	FI01	48		
BNORM	BN-2AMK3	BU01	43	2	*
BNORM	BN-2AMK3	RG01	9		
BNORM	BN-2AMK3	AD21	2		
BOEING	B-377	NA01	5	5	
BOEING	B-377	FI01	5		
BOEING	B-377	BU01	5	5	*
BOEING	B-377	AD01	4		
BOEING	B-707	NA01	440	440	
BOEING	B-707	AR01	432	14	*
BOEING	B-707	AD01	426	426	*
BOEING	B-707	LK01	425		
BOEING	B-707	FI01	285		
BOEING	B-707	BU01	244		
BOEING	B-707	RG01	89		
BOEING	B-707	BU21	68		
BOEING	B-707	AD41	23		
BOEING	B-720	RG01	22		
BOEING	B-720	NA01	21	21	
BOEING	B-720	AD01	21	21	*
BOEING	B-720	FI01	20		
BOEING	B-720	AR01	19		*
BOEING	B-720	LK01	18		
BOEING	B-720	BU01	14		
BOEING	B-720	AD41	6		
BOEING	B-720	BU21	5		
BOEING	B-720	AD21	1		
BOEING	B-727	NA01	1,734	1,734	
BOEING	B-727	AR01	1,733		
BOEING	B-727	AD01	1,731	1,731	*
BOEING	B-727	FI01	1,714		
BOEING	B-727	LK01	1,710	3	*
BOEING	B-727	BU01	1,565		
BOEING	B-727	RG01	1,281		
BOEING	B-727	BU21	77		
BOEING	B-727	AD41	59		
BOEING	B-727	AD21	48		

BOEING B-737	NA01	2,271	2,271	
BOEING B-737	AD01	2,267	2,267	*
BOEING B-737	LK01	2,242	4	*
BOEING B-737	FI01	2,211		
BOEING B-737	AR01	2,211		
BOEING B-737	BU01	2,174		
BOEING B-737	RG01	944		
BOEING B-737	AD21	97		
BOEING B-737	BU21	28		
BOEINC B-737	AD41	25		
BOEING B-747	NA01	897	897	
BOEING B-747	AD01	897	897	*
BOEING B-747	LK01	894		*
BOEING B-747	AR01	888		
BOEING B-747	FI01	886		
BOEING B-747	BU01	864		
BOEING B-747	RG01	237		
BOEING B-747	AD21	44		
BOEING B-747	BU21	9		
BOEING B-747	AD41	9		
BOEING B-757	NA01	470	470	
BOEING B-757	AD01	469	469	*
BOEING B-757	LK01	465	1	*
BOEING B-757	BU01	449		
BOEING B-757	FI01	448		
BOEING B-757	AR01	446		
BOEING B-757	RG01	294		
BOEING B-757	AD21	8		
BOEING B-757	AD41	6		
BOEING B-757	BU21	4		
BOEING B-767	NA01	436	436	
BOEING B-767	AD01	436	436	*
BOEING B-767	LK01	434		*
BOEING B-767	FI01	431		
BOEING B-767	BU01	426		
BOEING B-767	AR01	424		
BOEING B-767	RG01	153		
BOEING B-767	AD21	57		
BOEING CONAIR-KC97	RG01	12		
BOEING CONAIR-KC97	FI01	10	9	*
BOEING CONAIR-KC97	NA01	9	9	
BOEING CONAIR-KC97	BU01	6		
BOEINX BV-107	RG01	6		
BOEINX BV-107	NA01	6	6	
BOEINX BV-107	FI01	6	6	*
BOEINX BV-107	BU01	6		*
BOEINX BV-107	AD21	2		
BOEINX BV-234	FI01	10		*
BOEINX BV-234	RG01	9		
BOEINX BV-234	NA01	9	9	
BOEINX BV-234	BU01	9	9	*
BOLKMS BO-105	NA01	274	274	
BOLKMS BO-105	BU01	236	42	*
BOLKMS BO-105	FI01	234	232	*
BOLKMS BO-105	RG01	210		
BOLKMS BO-105	AD21	38		
BOLKMS MBB-BK117	RG01	128		
BOLKMS MBB-BK117	NA01	115	115	
BOLKMS MBB-BK117	FI01	99	21	*
BOLKMS MBB-BK117	BU01	94	94	*
BOLKMS MBB-BK117	AD21	8		
BRSTOL BT-175	NA01	7	7	
BRSTOL BT-175	AD01	7	7	*
BRSTOL BT-175	BU01	3		
CASA C-212	NA01	286	286	
CASA C-212	LK01	286	284	*
CASA C-212	AD01	277		
CASA C-212	AR01	185		
CASA C-212	FI01	73		
CASA C-212	BU01	57	2	*
CASA C-212	RG01	43		
CASA C-212	AD41	8		
CASA C-212	AD21	3		
CASA C-235	NA01	46	46	
CASA C-235	LK01	45	44	*
CASA C-235	AR01	29		
CASA C-235	FI01	13		
CASA C-235	BU01	13	2	*
CASA C-235	RG01	1		
CESSNA CE-150	RG01	#,###		
CESSNA CE-150	AD21	1,754		
CESSNA CE-150	NA01	161	161	
CESSNA CE-150	FI01	161	161	*
CESSNA CE-152	RG01	4,900		
CESSNA CE-152	AD21	424		
CESSNA CE-152	NA01	139	139	
CESSNA CE-152	FI01	139	139	*
CESSNA CE-172	RG01	#,###		
CESSNA CE-172	AD21	3,673		
CESSNA CE-172	NA01	305	305	
CESSNA CE-172	FI01	305	305	*
CESSNA CE-180	RG01	2,908		
CESSNA CE-180	AD21	919		
CESSNA CE-180	NA01	45	45	
CESSNA CE-180	FI01	45	45	*
CESSNA CE-182	RG01	#,###		
CESSNA CE-182	AD21	1,343		
CESSNA CE-182	NA01	77	77	
CESSNA CE-182	FI01	63	63	*
CESSNA CE-182	BU01	44	14	*
CESSNA CE-185	RG01	1,690		
CESSNA CE-185	AD21	954		
CESSNA CE-185	NA01	496	496	
CESSNA CE-185	FI01	433	433	*
CESSNA CE-185	BU01	420	63	*
CESSNA CE-188	RG01	1,702		
CESSNA CE-188	AD21	231		
CESSNA CE-188	NA01	13	13	
CESSNA CE-188	FI01	13	13	*
CESSNA CE-206	RG01	2,857		
CESSNA CE-206	NA01	926	926	
CESSNA CE-206	BU01	807	141	*
CESSNA CE-206	FI01	785	785	*
CESSNA CE-206	AD21	563		
CESSNA CE-207	RG01	359		
CESSNA CE-207	NA01	303	303	
CESSNA CE-207	BU01	280	32	*
CESSNA CE-207	FI01	271	271	*
CESSNA CE-207	AD21	49		
CESSNA CE-208	NA01	486	486	
CESSNA CE-208	AD01	484	484	*
CESSNA CE-208	BU01	364	2	*
CESSNA CE-208	RG01	357		
CESSNA CE-208	FI01	356		

CESSNA CE-208	AD41	27		
CESSNA CE-208	AD21	24		
CESSNA CE-210	RG01	6,287		
CESSNA CE-210	NA01	662	662	
CESSNA CE-210	AD21	449	378	*
CESSNA CE-210	BU01	249	249	*
CESSNA CE-210	FI01	239	35	
CESSNA CE-210	AD41	2		
CESSNA CE-303	RG01	138		
CESSNA CE-303	NA01	34	34	
CESSNA CE-303	BU01	28	7	*
CESSNA CE-303	FI01	27	27	*
CESSNA CE-303	AD21	12		
CESSNA CE-310	RG01	3,233		
CESSNA CE-310	NA01	495	495	
CESSNA CE-310	FI01	284	33	
CESSNA CE-310	BU01	283	283	*
CESSNA CE-310	AD21	265	179	*
CESSNA CE-320	RG01	350		
CESSNA CE-320	AD21	13		
CESSNA CE-320	NA01	11	11	
CESSNA CE-320	BU01	8	4	*
CESSNA CE-320	FI01	7	7	*
CESSNA CE-335	RG01	41		
CESSNA CE-335	NA01	7	7	
CESSNA CE-335	AD21	6	3	*
CESSNA CE-335	BU01	4	4	*
CESSNA CE-336	RG01	87		
CESSNA CE-336	NA01	11	11	
CESSNA CE-336	AD21	11	11	*
CESSNA CE-336	BU01	2		
CESSNA CE-337	RG01	1,299		
CESSNA CE-337	NA01	246	246	
CESSNA CE-337	AD21	161	110	*
CESSNA CE-337	FI01	125	25	
CESSNA CE-337	BU01	111	111	*
CESSNA CE-340	RG01	889		
CESSNA CE-340	AD21	68		
CESSNA CE-340	NA01	60	60	
CESSNA CE-340	FI01	54	54	*
CESSNA CE-340	BU01	48	6	*
CESSNA CE-401	RG01	236		
CESSNA CE-401	NA01	51	51	
CESSNA CE-401	FI01	43	43	*
CESSNA CE-401	BU01	39	8	*
CESSNA CE-401	AD21	20		
CESSNA CE-402	RG01	637		
CESSNA CE-402	NA01	582	582	
CESSNA CE-402	FI01	518	518	*
CESSNA CE-402	BU01	472	64	*
CESSNA CE-402	AD21	117		
CESSNA CE-402	AD41	1		
CESSNA CE-404	RG01	155		
CESSNA CE-404	NA01	144	144	
CESSNA CE-404	BU01	128	128	*
CESSNA CE-404	FI01	124	11	
CESSNA CE-404	AD21	34	5	*
CESSNA CE-404	AD41	2		
CESSNA CE-406	NA01	46	46	
CESSNA CE-406	AD01	45	45	*
CESSNA CE-406	AD41	32		
CESSNA CE-406	BU01	26	1	*
CESSNA CE-406	FI01	18		
CESSNA CE-411	RG01	172		
CESSNA CE-411	AD21	7		
CESSNA CE-411	NA01	6	6	
CESSNA CE-411	FI01	5	5	*
CESSNA CE-411	BU01	4	1	*
CESSNA CE-414	RG01	774		
CESSNA CE-414	NA01	103	103	
CESSNA CE-414	FI01	80	80	*
CESSNA CE-414	BU01	79	23	*
CESSNA CE-414	AD21	48		
CESSNA CE-414	AD41	2		
CESSNA CE-421	RG01	1,241		
CESSNA CE-421	NA01	185	185	
CESSNA CE-421	FI01	153	153	*
CESSNA CE-421	BU01	145	32	*
CESSNA CE-421	AD21	69		
CESSNA CE-421	AD41	30		
CESSNA CE-425	NA01	228	228	
CESSNA CE-425	AD41	227	228	*
CESSNA CE-425	JN01	225	1	*
CESSNA CE-425	RG01	171		
CESSNA CE-425	FI01	17		
CESSNA CE-425	BU01	15		
CESSNA CE-425	AD21	10		
CESSNA CE-441	NA01	346	346	
CESSNA CE-441	AD41	335	336	*
CESSNA CE-441	JN01	334	11	*
CESSNA CE-441	RG01	221		
CESSNA CE-441	FI01	78		
CESSNA CE-441	BU01	77		
CESSNA CE-441	AD21	33		
CESSNA CE-441	AD01	6		
CESSNA CE-500	AD41	693	369	*
CESSNA CE-500	BU21	380		
CESSNA CE-500	NA01	377	377	
CESSNA CE-500	LK01	375		
CESSNA CE-500	JN01	370	9	*
CESSNA CE-500	RG01	176		
CESSNA CE-500	FI01	112		
CESSNA CE-500	BU01	110		
CESSNA CE-500	AD21	34		
CESSNA CE-500	AD01	14		
CESSNA CE-501	NA01	297	297	
CESSNA CE-501	JN01	293	4	*
CESSNA CE-501	AD41	293	293	*
CESSNA CE-501	LK01	292		
CESSNA CE-501	BU21	292		
CESSNA CE-501	RG01	216		
CESSNA CE-501	FI01	36		
CESSNA CE-501	BU01	36		
CESSNA CE-501	AD21	8		
CESSNA CE-501	AD01	7		
CESSNA CE-525	AD41	8	4	*
CESSNA CE-525	NA01	4	4	
CESSNA CE-525	RG01	2		
CESSNA CE-525	LK01	2		*
CESSNA CE-525	BU21	2		
CESSNA CE-525	JN01	1		
CESSNA CE-550	NA01	566	566	
CESSNA CE-550	JN01	566	17	*
CESSNA CE-550	LK01	564		
CESSNA CE-550	BU21	561		
CESSNA CE-550	AD41	549	550	*
CESSNA CE-550	RG01	341		
CESSNA CE-550	BU01	135		
CESSNA CE-550	FI01	127		

CESSNA CE-550	AD01	19		
CESSNA CE-551	NA01	94	94	
CESSNA CE-551	BU21	91		
CESSNA CE-551	AD41	91	91	*
CESSNA CE-551	JN01	87	3	*
CESSNA CE-551	LK01	85		
CESSNA CE-551	RG01	50		
CESSNA CE-551	BU01	16		
CESSNA CE-551	FI01	10		
CESSNA CE-552	RG01	15		
CESSNA CE-552	NA01	15	15	
CESSNA CE-552	LK01	15	15	*
CESSNA CE-552	BU21	15		
CESSNA CE-560	NA01	191	191	
CESSNA CE-560	JN01	191	191	*
CESSNA CE-560	BU21	190		
CESSNA CE-560	LK01	187		
CESSNA CE-560	AD41	186		*
CESSNA CE-560	RG01	127		
CESSNA CE-560	BU01	18		
CESSNA CE-560	FI01	11		
CESSNA CE-560	AD01	4		
CESSNA CE-650	AD41	243	221	*
CESSNA CE-650	JN01	230	8	*
CESSNA CE-650	BU21	230		
CESSNA CE-650	NA01	229	229	
CESSNA CE-650	LK01	227		
CESSNA CE-650	RG01	176		
CESSNA CE-650	BU01	29		
CESSNA CE-650	FI01	26		
CESSNA CE-650	AD01	4		
CESSNA CE-650	AD21	3		
CESSNA CE-S550	LK01	159		
CESSNA CE-S550	NA01	158	158	
CESSNA CE-S550	BU21	158		
CESSNA CE-S550	AD41	158	158	*
CESSNA CE-S550	JN01	156		*
CESSNA CE-S550	RG01	122		
CESSNA CE-S550	FI01	37		
CESSNA CE-S550	BU01	32		
CESSNA CE-S550	AD01	1		
CHAMP CHAMP-7	RG01	1,439		
CHAMP CHAMP-7	AD21	854	449	*
CHAMP CHAMP-7	NA01	299	299	
CHAMP CHAMP-7	FI01	4	4	*
CHAMP CHAMP-8	NA01	108	108	
CHAMP CHAMP-8	AD21	108	108	*
CHAMP CHAMP-8	RG01	7		
CNDAIR CL-215	NA01	66	66	
CNDAIR CL-215	FI01	63	63	*
CNDAIR CL-215	BU01	46	3	*
CNDAIR CL-215	AD21	46		
CNDAIR CL-44	NA01	16	16	
CNDAIR CL-44	FI01	12		
CNDAIR CL-44	AD01	12	12	*
CNDAIR CL-44	LK01	11	4	*
CNDAIR CL-44	RG01	7		
CNDAIR CL-44	BU01	6		
CNDAIR CL-600	RG01	169		
CNDAIR CL-600	NA01	83	83	
CNDAIR CL-600	JN01	83	13	*
CNDAIR CL-600	LK01	82		
CNDAIR CL-600	BU21	82		
CNDAIR CL-600	AD41	70	70	*
CNDAIR CL-600	FI01	26		
CNDAIR CL-600	BU01	22		
CNDAIR CL-600	AD21	21		
CNDAIR CL-600	AD01	1		
CNDAIR CL-601	NA01	179	179	
CNDAIR CL-601	LK01	178		
CNDAIR CL-601	BU21	176		
CNDAIR CL-601	JN01	175	14	*
CNDAIR CL-601	AD41	167	165	*
CNDAIR CL-601	BU01	29		
CNDAIR CL-601	FI01	27		
CNDAIR CL-601	RG01	3		
CNDAIR CL-601	AD01	1		
CNDAIR CL-66	NA01	7	7	
CNDAIR CL-66	FI01	7	7	*
CNDAIR CL-66	BU01	7		*
CNDAIR CL-RJ	NA01	3	3	
CNDAIR CL-RJ	LK01	3	3	*
CNDAIR CL-RJ	AD01	3		*
CNDAIR CL-RJ	BU01	2		
CONAIR CONAIR-CS2F	NA01	27	27	
CONAIR CONAIR-CS2F	BU01	27	27	*
CONAIR CONAIR-CS2F	AD21	14		
CURTIS CURTIS-C46	NA01	81	81	
CURTIS CURTIS-C46	LK01	73	39	*
CURTIS CURTIS-C46	FI01	42	42	*
CURTIS CURTIS-C46	BU01	30		
CURTIS CURTIS-C46	RG01	13		
CURTIS CURTIS-C46	AD21	3		
CVAC CV-240	NA01	98	98	
CVAC CV-240	LK01	98	98	*
CVAC CV-240	RG01	91		
CVAC CV-240	FI01	28		
CVAC CV-240	BU01	25		*
CVAC CV-240	AD01	20		
CVAC CV-240	AD21	1		
CVAC CV-340	RG01	116		
CVAC CV-340	AD21	94	34	*
CVAC CV-340	NA01	81	81	
CVAC CV-340	LK01	45	45	*
CVAC CV-340	FI01	9	2	
CVAC CV-340	BU01	8		
CVAC CV-440	NA01	307	307	
CVAC CV-440	LK01	305	157	*
CVAC CV-440	FI01	150	150	*
CVAC CV-440	BU01	141		
CVAC CV-440	AD01	123		
CVAC CV-440	RG01	55		
CVAC CV-440	AD41	28		
CVAC CV-440	AD21	24		
CVAC CV-880	NA01	21	21	
CVAC CV-880	AD01	19	19	*
CVAC CV-880	LK01	3	2	*
CVAC CV-880	BU21	3		
CVAC CV-880	RG01	2		
CVAC CV-880	FI01	1		
CVAC CV-880	BU01	1		
CVAC CV-990	NA01	3	3	
CVAC CV-990	LK01	3	3	*
CVAC CV-990	RG01	2		
CVAC CV-990	FI01	2		

CVAC	CV-990	AD01	1		
CVAC	PB-Y5	NA01	30	30	
CVAC	PB-Y5	FI01	23		
CVAC	PB-Y5	AD21	19	13	*
CVAC	PB-Y5	BU01	17	17	*
CVAC	PB-Y5	RG01	3		
DHAV	DH-104	RG01	43		
DHAV	DH-104	NA01	10	10	
DHAV	DH-104	BU01	10	10	*
DHAV	DH-104	FI01	3		
DHAV	DH-104	AD21	1		
DHAV	DH-114	NA01	50	50	
DHAV	DH-114	LK01	50	39	*
DHAV	DH-114	RG01	31		
DHAV	DH-114	BU01	12		
DHAV	DH-114	FI01	11	11	*
DHAV	DH-125	JN01	82	4	
DHAV	DH-125	NA01	70	70	
DHAV	DH-125	BU21	69		
DHAV	DH-125	LK01	65	7	*
DHAV	DH-125	AD41	59	60	*
DHAV	DH-125	RG01	46		
DHAV	DH-125	FI01	15		
DHAV	DH-125	BU01	12		
DHAV	DH-125	AD21	6		
DHAV	DH-125	AD01	1		
DHAV	DH-ST-27	NA01	4	4	
DHAV	DH-ST-27	LK01	4	4	*
DHAV	DHC-2	NA01	471	471	
DHAV	DHC-2	AD21	457		
DHAV	DHC-2	FI01	439	438	*
DHAV	DHC-2	BU01	430	33	*
DHAV	DHC-2	RG01	202		
DHAV	DHC-2	AD41	56		
DHAV	DHC-2	AD01	47		
DHAV	DHC-3	NA01	162	162	
DHAV	DHC-3	BU01	156	8	*
DHAV	DHC-3	FI01	154	154	*
DHAV	DHC-3	AD21	129		
DHAV	DHC-3	RG01	53		
DHAV	DHC-3	AD01	4		
DHAV	DHC-4	RG01	33		
DHAV	DHC-4	NA01	10	10	
DHAV	DHC-4	FI01	9	9	*
DHAV	DHC-4	BU01	9	1	*
DHAV	DHC-4	AD21	1		
DHAV	DHC-5	NA01	113	113	
DHAV	DHC-5	AD01	112	112	*
DHAV	DHC-5	FI01	3	1	*
DHAV	DHC-5	BU01	2		
DHAV	DHC-5	AD21	1		
DHAV	DHC-6	NA01	691	691	
DHAV	DHC-6	LK01	676	23	*
DHAV	DHC-6	AD01	666	666	*
DHAV	DHC-6	BU01	513		
DHAV	DHC-6	FI01	507		
DHAV	DHC-6	AD41	232		
DHAV	DHC-6	AD21	185	2	
DHAV	DHC-6	RG01	150		
DHAV	DHC-7	NA01	109	109	
DHAV	DHC-7	LK01	109		*
DHAV	DHC-7	AD01	109	109	*
DHAV	DHC-7	FI01	93		
DHAV	DHC-7	BU01	83		
DHAV	DHC-7	RG01	51		
DHAV	DHC-7	AD41	22		
DHAV	DHC-7	AD21	5		
DHAV	DHC-8	NA01	326	326	
DHAV	DHC-8	LK01	324	11	*
DHAV	DHC-8	AD01	315	315	*
DHAV	DHC-8	FI01	296		
DHAV	DHC-8	BU01	286		
DHAV	DHC-8	AD21	232		
DHAV	DHC-8	RG01	115		
DHAV	DHC-8	AD41	12		
DORNER	DO-228	AR01	209	12	
DORNER	DO-228	NA01	202	202	
DORNER	DO-228	LK01	179	20	*
DORNER	DO-228	AD01	170	170	*
DORNER	DO-228	FI01	136		
DORNER	DO-228	BU01	108		
DORNER	DO-228	RG01	38		
DORNER	DO-228	AD41	30		
DORNER	DO-27	NA01	8	8	
DORNER	DO-27	FI01	7	7	*
DORNER	DO-27	BU01	5	1	*
DORNER	DO-27	AD21	1		
DORNER	DO-28	NA01	18	18	
DORNER	DO-28	FI01	17	17	*
DORNER	DO-28	BU01	14	1	*
DORNER	DO-28	RG01	9		
DORNER	DO-28	AD21	1		
DOUG	DC-10	NA01	427	427	
DOUG	DC-10	LK01	427	427	*
DOUG	DC-10	AR01	427		*
DOUG	DC-10	AD01	368		
DOUG	DC-10	FI01	365		
DOUG	DC-10	BU01	364		
DOUG	DC-10	RG01	217		
DOUG	DC-10	AD21	8		
DOUG	DC-3	NA01	1,013	1,013	
DOUG	DC-3	LK01	991	639	*
DOUG	DC-3	RG01	550		
DOUG	DC-3	FI01	382	374	*
DOUG	DC-3	BU01	340		
DOUG	DC-3	AD21	74		
DOUG	DC-3	AD01	2		
DOUG	DC-4	NA01	118	118	
DOUG	DC-4	LK01	117	117	*
DOUG	DC-4	RG01	97		
DOUG	DC-4	FI01	75		
DOUG	DC-4	BU01	72	1	*
DOUG	DC-4	AD21	13		
DOUG	DC-6	NA01	210	210	
DOUG	DC-6	LK01	205	205	*
DOUG	DC-6	RG01	148		
DOUG	DC-6	FI01	119		
DOUG	DC-6	BU01	102	5	*
DOUG	DC-6	AD21	15		
DOUG	DC-7	RG01	59		
DOUG	DC-7	NA01	34	34	
DOUG	DC-7	LK01	34	34	*
DOUG	DC-7	FI01	22		
DOUG	DC-7	BU01	20		*
DOUG	DC-7	AD21	1		
DOUG	DC-8	NA01	331	331	

DOUG	DC-8	AR01	324	7	
DOUG	DC-8	AD01	321	321	*
DOUG	DC-8	LK01	309	3	*
DOUG	DC-8	FI01	300		
DOUG	DC-8	BU01	271		
DOUG	DC-8	RG01	262		
DOUG	DC-8	BU21	16		
DOUG	DC-8	AD21	10		
DOUG	DC-8	AD41	9		
DOUG	DC-9	NA01	1,799	1,799	
DOUG	DC-9	LK01	1,796	56	*
DOUG	DC-9	AR01	1,776		
DOUG	DC-9	AD01	1,743	1,743	*
DOUG	DC-9	FI01	1,734		
DOUG	DC-9	BU01	1,622		
DOUG	DC-9	RG01	998		
DOUG	DC-9	AD21	37		
DOUG	DC-9	BU21	22		
DOUG	DC-9	AD41	11		
DOUG	DC-A26	RG01	37		
DOUG	DC-A26	NA01	23	23	
DOUG	DC-A26	BU01	23	23	*
DOUG	DC-A26	FI01	22		*
DOUG	DC-A26	AD21	18		
DOUG	MD-11	NA01	59	59	
DOUG	MD-11	BU01	58	58	*
DOUG	MD-11	LK01	55	1	*
DOUG	MD-11	AD01	55		
DOUG	MD-11	FI01	52		
DOUG	MD-11	AR01	46		
DOUG	MD-11	RG01	21		
DOUG	MD-88	NA01	129	129	
DOUG	MD-88	BU01	128	128	*
DOUG	MD-88	LK01	127	1	*
DOUG	MD-88	AD01	127		
DOUG	MD-88	FI01	124		
DOUG	MD-88	AR01	124		
DOUG	MD-88	RG01	114		
EMB	EMB-110	NA01	428	428	
EMB	EMB-110	LK01	423	30	*
EMB	EMB-110	AD01	398	398	*
EMB	EMB-110	FI01	251		
EMB	EMB-110	BU01	219		
EMB	EMB-110	AD41	86		
EMB	EMB-110	RG01	74		
EMB	EMB-111	NA01	21	21	
EMB	EMB-111	LK01	21		*
EMB	EMB-111	AD01	21	21	*
EMB	EMB-120	NA01	259	259	
EMB	EMB-120	LK01	257	5	*
EMB	EMB-120	AD01	254	254	*
EMB	EMB-120	AR01	249		
EMB	EMB-120	BU01	244		
EMB	EMB-120	FI01	230		
EMB	EMB-120	RG01	193		
EMB	EMB-120	AD21	9		
EMB	EMB-120	AD41	1		
EMB	EMB-121	NA01	55	55	
EMB	EMB-121	AD41	54	54	*
EMB	EMB-121	BU01	27	1	*
EMB	EMB-121	FI01	24		
EMB	EMB-710	NA01	15	15	
EMB	EMB-710	FI01	13	13	*
EMB	EMB-710	BU01	7	2	*
EMB	EMB-720	NA01	35	35	
EMB	EMB-720	FI01	30	30	*
EMB	EMB-720	BU01	18	5	*
EMB	EMB-721	NA01	33	33	
EMB	EMB-721	FI01	31	31	*
EMB	EMB-721	BU01	25	2	*
EMB	EMB-810	NA01	128	128	
EMB	EMB-810	FI01	100	100	*
EMB	EMB-810	BU01	97	28	*
EMB	EMB-820	AD41	70		
EMB	EMB-820	NA01	59	59	
EMB	EMB-820	BU01	56	14	*
EMB	EMB-820	FI01	45	45	*
EMB	EMB-820	AD21	1		
ENSTRM	ENSTRM-F28	RG01	453		
ENSTRM	ENSTRM-F28	AD21	39		
ENSTRM	ENSTRM-F28	NA01	9	9	
ENSTRM	ENSTRM-F28	FI01	9	9	*
EVNAIR	EVNAIR-4500	NA01	5	5	
EVNAIR	EVNAIR-4500	BU01	5	1	*
EVNAIR	EVNAIR-4500	FI01	4	4	*
FOKKER	F-27	NA01	621	621	
FOKKER	F-27	LK01	609	76	*
FOKKER	F-27	AR01	590		
FOKKER	F-27	AD01	545	545	*
FOKKER	F-27	FI01	506		
FOKKER	F-27	BU01	435		
FOKKER	F-27	RG01	63		
FOKKER	F-27	AD21	18		
FOKKER	F-27	AD41	15		
FOKKER	F-28	NA01	378	378	
FOKKER	F-28	LK01	375	34	*
FOKKER	F-28	FI01	347		
FOKKER	F-28	AD01	344	344	*
FOKKER	F-28	AR01	331		
FOKKER	F-28	BU01	322		
FOKKER	F-28	RG01	99		
FOKKER	F-28	BU21	29		
FOKKER	F-28	AD21	25		
FOKKER	F-28	AD41	23		
FRCHLD	FH-227	NA01	62	62	
FRCHLD	FH-227	LK01	62	6	*
FRCHLD	FH-227	FI01	58		
FRCHLD	FH-227	AD01	56	56	*
FRCHLD	FH-227	BU01	36		
FRCHLD	FH-227	AD41	16		
FRCHLD	FH-227	RG01	7		
FRCHLD	FH-27	NA01	79	79	
FRCHLD	FH-27	LK01	76	12	*
FRCHLD	FH-27	AD01	67	67	*
FRCHLD	FH-27	BU01	42		
FRCHLD	FH-27	RG01	30		
FRCHLD	FH-27	AD41	26		
FRCHLD	FH-27	AD21	6		
FRCHLD	FH-27	FI01	2		
FRCHLD	FRCHLD-C119	RG01	36		
FRCHLD	FRCHLD-C119	NA01	9	9	
FRCHLD	FRCHLD-C119	FI01	9	8	*
FRCHLD	FRCHLD-C119	BU01	7	1	*

GOVT	GOVT-N22	NA01	148	148	
GOVT	GOVT-N22	LK01	143	88	*
GOVT	GOVT-N22	AD01	60	60	*
GOVT	GOVT-N22	BU01	26		
GOVT	GOVT-N22	FI01	23		
GOVT	GOVT-N22	RG01	4		
GOVT	GOVT-N22	AD41	3		
GRUMAN	G-164	RG01	1,345		
GRUMAN	G-164	AD21	188		
GRUMAN	G-164	NA01	14	14	
GRUMAN	G-164	FI01	14	14	*
GRUMAV	G-21	RG01	57		
GRUMAV	G-21	NA01	19	19	
GRUMAV	G-21	AD41	18		
GRUMAV	G-21	FI01	17	17	*
GRUMAV	G-21	BU01	13	2	*
GRUMAV	G-21	AD01	1		
GRUMAV	GRUMAN-TBM	RG01	43		
GRUMAV	GRUMAN-TBM	AD21	21		
GRUMAV	GRUMAN-TBM	NA01	18	18	
GRUMAV	GRUMAN-TBM	BU01	18	18	*
GULSTM	GA-1159	NA01	633	633	
GULSTM	GA-1159	JN01	632	31	*
GULSTM	GA-1159	BU21	631		
GULSTM	GA-1159	LK01	629		
GULSTM	GA-1159	AD41	603	603	*
GULSTM	GA-1159	RG01	425		
GULSTM	GA-1159	BU01	110		
GULSTM	GA-1159	FI01	100		
GULSTM	GA-1159	AD01	12		
GULSTM	GA-1159	AD21	4		
GULSTM	GA-159	NA01	169	169	
GULSTM	GA-159	LK01	167	19	*
GULSTM	GA-159	JN01	150	150	*
GULSTM	GA-159	AD41	146		
GULSTM	GA-159	RG01	78		
GULSTM	GA-159	FI01	65		
GULSTM	GA-159	BU01	57		
GULSTM	GA-159	AD01	42		
GULSTM	GA-159	AD21	8		
GULSTM	GA-44	RG01	36		
GULSTM	GA-44	NA01	14	14	
GULSTM	GA-44	FI01	12	4	*
GULSTM	GA-44	BU01	10	10	*
GULSTM	GA-44	AD21	3		
GULSTM	GA-500	RG01	321		
GULSTM	GA-500	NA01	161	161	
GULSTM	GA-500	FI01	144	144	*
GULSTM	GA-500	BU01	133	17	*
GULSTM	GA-500	AD21	43		
GULSTM	GA-560	RG01	169		
GULSTM	GA-560	NA01	6	6	
GULSTM	GA-560	BU01	6	6	*
GULSTM	GA-560	FI01	5		*
GULSTM	GA-680	RG01	391		
GULSTM	GA-680	AD41	224	112	*
GULSTM	GA-680	NA01	177	177	
GULSTM	GA-680	FI01	81		
GULSTM	GA-680	BU01	68	65	*
GULSTM	GA-680	AD21	26		
GULSTM	GA-681	AD41	116	49	*
GULSTM	GA-681	NA01	58	58	
GULSTM	GA-681	RG01	22		
GULSTM	GA-681	BU01	9	9	*
GULSTM	GA-681	FI01	8		
GULSTM	GA-681	AD01	1		
GULSTM	GA-690	AD41	1,303	809	*
GULSTM	GA-690	NA01	864	864	
GULSTM	GA-690	JN01	823	58	*
GULSTM	GA-690	RG01	138		
GULSTM	GA-690	BU01	130		
GULSTM	GA-690	FI01	125		
GULSTM	GA-690	BU21	107		
GULSTM	GA-690	AD21	36		
GULSTM	GA-690	AD01	15		
GULSTM	GA-7	AD21	30	15	*
GULSTM	GA-7	NA01	25	25	
GULSTM	GA-7	FI01	10	10	
GULSTM	GA-7	BU01	10		*
GULSTM	GA-7	RG01	2		
GULSTM	GA-73	RG01	31		
GULSTM	GA-73	NA01	14	14	
GULSTM	GA-73	FI01	13	13	*
GULSTM	GA-73	BU01	10	1	*
GULSTM	GA-73	AD41	8		
GULSTM	GA-73	AD01	6		
GULSTM	GA-73	AD21	4		
HAL	DO-228	LK01	17	8	*
HAL	DO-228	NA01	8	8	
HAL	DO-228	BU01	6		
HAL	DO-228	FI01	1		
HAL	HS-748	NA01	81	81	
HAL	HS-748	LK01	81		*
HAL	HS-748	AD01	81	81	*
HAL	HS-748	BU01	15		
HAL	SA-315	NA01	1	1	
HAL	SA-315	BU01	1	1	*
HAL	SA-316	NA01	2	2	
HAL	SA-316	BU01	2	2	*
HAMFLU	HFB-320	AD41	38	19	*
HAMFLU	HFB-320	BU21	35		
HAMFLU	HFB-320	NA01	34	34	
HAMFLU	HFB-320	LK01	30	15	*
HAMFLU	HFB-320	RG01	13		
HAMFLU	HFB-320	FI01	9		
HAMFLU	HFB-320	BU01	5		
HELBRA	AS-350	NA01	23	23	
HELBRA	AS-350	BU01	20	7	*
HELBRA	AS-350	FI01	17	16	*
HELIO	HELIO-250	RG01	19		
HELIO	HELIO-250	AD21	6		*
HELIO	HELIO-250	NA01	3	3	
HELIO	HELIO-250	FI01	3	3	*
HELIO	HELIO-250	BU01	2		
HELIO	HELIO-295	RG01	95		
HELIO	HELIO-295	NA01	22	22	
HELIO	HELIO-295	BU01	20	20	*
HELIO	HELIO-295	FI01	18	2	*
HELIO	HELIO-295	AD21	9		
HELIO	HELIO-395	RG01	33		
HELIO	HELIO-395	NA01	6	6	

HELIO	HELIO-395	FI01	6	2	*
HELIO	HELIO-395	AD21	6		
HELIO	HELIO-395	BU01	4	4	*
HILLER	HILLER-UH12	RG01	702		
HILLER	HILLER-UH12	AD21	48		
HILLER	HILLER-UH12	NA01	7	7	
HILLER	HILLER-UH12	FI01	7	7	*
HILLER	HILLER-UH12	BU01	4		
HNLYPG	HP-137	NA01	50	50	
HNLYPG	HP-137	LK01	50	37	*
HNLYPG	HP-137	RG01	13		
HNLYPG	HP-137	AD01	13	13	*
HNLYPG	HP-137	FI01	7		
HNLYPG	HP-137	AD41	6		
HNLYPG	HT-300	NA01	21	21	
HNLYPG	HT-300	LK01	18	3	*
HNLYPG	HT-300	FI01	17	17	*
HNLYPG	HT-300	AD01	16	1	
HUGHES	HU-269	RG01	675		
HUGHES	HU-269	AD21	194		
HUGHES	HU-269	NA01	41	41	
HUGHES	HU-269	FI01	41	41	*
HUGHES	HU-369	RG01	668		
HUGHES	HU-369	NA01	402	402	
HUGHES	HU-369	BU01	352	73	*
HUGHES	HU-369	FI01	329	329	*
HUGHES	HU-369	AD21	188		
HWKSLY	BAE-125	LK01	6		*
HWKSLY	HS-121	FI01	31		
HWKSLY	HS-121	NA01	15	15	
HWKSLY	HS-121	LK01	15	6	*
HWKSLY	HS-121	BU01	10		
HWKSLY	HS-121	AD01	9	9	*
HWKSLY	HS-125	NA01	254	254	
HWKSLY	HS-125	LK01	248	50	*
HWKSLY	HS-125	BU21	244		
HWKSLY	HS-125	JN01	220		
HWKSLY	HS-125	AD41	204	205	*
HWKSLY	HS-125	RG01	94		
HWKSLY	HS-125	BU01	63		
HWKSLY	HS-125	FI01	62		
HWKSLY	HS-125	AD21	14		
HWKSLY	HS-125	AD01	8		
HWKSLY	HS-748	NA01	232	232	
HWKSLY	HS-748	AD01	228	228	*
HWKSLY	HS-748	AR01	216		
HWKSLY	HS-748	LK01	203	4	*
HWKSLY	HS-748	FI01	162		
HWKSLY	HS-748	BU01	150		
HWKSLY	HS-748	AD21	83		
HWKSLY	HS-748	AD41	12		
ILYUSH	IL-14	FI01	28	9	*
ILYUSH	IL-14	BU01	14		
ILYUSH	IL-14	NA01	9	9	
ILYUSH	IL-14	AD01	1		
ILYUSH	IL-18	NA01	131	131	
ILYUSH	IL-18	LK01	131	131	*
ILYUSH	IL-18	AD01	128		
ILYUSH	IL-18	FI01	101		
ILYUSH	IL-18	BU01	95		
ILYUSH	IL-62	NA01	237	237	
ILYUSH	IL-62	LK01	237	237	*
ILYUSH	IL-62	AD01	229		
ILYUSH	IL-62	FI01	219		
ILYUSH	IL-62	BU01	205		
ILYUSH	IL-76	NA01	350	350	
ILYUSH	IL-76	LK01	350	350	*
ILYUSH	IL-76	AD01	320		
ILYUSH	IL-76	FI01	188		
ILYUSH	IL-76	BU01	122		
ILYUSH	IL-86	NA01	83	83	
ILYUSH	IL-86	LK01	83	83	*
ILYUSH	IL-86	AD01	80		
ILYUSH	IL-86	FI01	77		
ILYUSH	IL-86	BU01	28		
ILYUSH	IL-96	NA01	3	3	
ILYUSH	IL-96	LK01	3	3	*
ILYUSH	IL-96	BU01	2		
ILYUSH	IL-96	AD01	2		*
INDAER	PD-808526	BU21	23		
INDAER	PD-808526	NA01	4	4	
INDAER	PD-808526	FI01	4	4	*
INDAER	PD-808526	BU01	4		
INDAER	PD-808526	AD41	1		
IPTN	AS-332	NA01	3	3	
IPTN	AS-332	FI01	3	3	*
IPTN	NC-212	AR01	172		
IPTN	NC-212	NA01	77	77	
IPTN	NC-212	AD01	75		
IPTN	NC-212	LK01	72	72	*
IPTN	NC-212	BU01	49	5	*
IPTN	NC-212	FI01	46		
IPTN	NC-235	AD01	57		
IPTN	NC-235	AR01	22		
IPTN	NC-235	NA01	17	17	
IPTN	NC-235	LK01	16	16	*
IPTN	NC-235	BU01	16	1	*
IPTN	NC-235	FI01	14		
ISRAEL	IA-101	NA01	9	9	
ISRAEL	IA-101	LK01	9	5	*
ISRAEL	IA-101	AD41	5		
ISRAEL	IA-101	AD01	4	4	*
ISRAEL	IA-101	FI01	1		
ISRAEL	IA-101	BU01	1		
ISRAEL	IA-102	NA01	14	14	
ISRAEL	IA-102	LK01	12	5	*
ISRAEL	IA-102	FI01	9	9	*
ISRAEL	IA-102	BU01	8		
ISRAEL	IA-102	AD01	4		
ISRAEL	IA-1121	NA01	122	122	
ISRAEL	IA-1121	AD41	120	120	*
ISRAEL	IA-1121	LK01	104		
ISRAEL	IA-1121	RG01	102		
ISRAEL	IA-1121	JN01	86	2	*
ISRAEL	IA-1121	FI01	16		
ISRAEL	IA-1121	BU01	14		
ISRAEL	IA-1123	NA01	32	32	
ISRAEL	IA-1123	LK01	30		
ISRAEL	IA-1123	BU21	30		

ISRAEL	IA-1123	JN01	28	5	*
ISRAEL	IA-1123	AD41	27	27	*
ISRAEL	IA-1123	RG01	22		
ISRAEL	IA-1123	BU01	6		
ISRAEL	IA-1123	FI01	5		
ISRAEL	IA-1124	BU21	260		
ISRAEL	IA-1124	NA01	257	257	
ISRAEL	IA-1124	LK01	256		
ISRAEL	IA-1124	JN01	255	5	*
ISRAEL	IA-1124	AD41	252	252	*
ISRAEL	IA-1124	RG01	208		
ISRAEL	IA-1124	FI01	25		
ISRAEL	IA-1124	AD21	24		
ISRAEL	IA-1124	BU01	17		
ISRAEL	IA-1124	AD01	13		
ISRAEL	IA-1125	NA01	54	54	
ISRAEL	IA-1125	LK01	54		
ISRAEL	IA-1125	BU21	54		
ISRAEL	IA-1125	AD41	54	53	*
ISRAEL	IA-1125	JN01	53	1	*
ISRAEL	IA-1125	RG01	47		
ISRAEL	IA-1125	BU01	2		
ISRAEL	IA-201	NA01	69	69	
ISRAEL	IA-201	LK01	60	22	*
ISRAEL	IA-201	AD01	47	47	*
ISRAEL	IA-201	FI01	6		
ISRAEL	IA-201	BU01	6		
KAMOV	KA-26	NA01	99	99	
KAMOV	KA-26	BU01	99	99	*
KAWSKI	KV-107	NA01	8	8	
KAWSKI	KV-107	FI01	8		*
KAWSKI	KV-107	BU01	8	8	*
KAWSKI	KV-107	RG01	5		
LAKE	LA-250	RG01	91		
LAKE	LA-250	NA01	4	4	
LAKE	LA-250	BU01	4	4	*
LAKE	LA-250	AD21	4		
LAKE	LA-250	FI01	2		
LEAR	LR-23	AD41	106	53	*
LEAR	LR-23	NA01	58	58	
LEAR	LR-23	LK01	54		
LEAR	LR-23	BU21	51		
LEAR	LR-23	JN01	50	5	*
LEAR	LR-23	RG01	47		
LEAR	LR-23	FI01	22		
LEAR	LR-23	BU01	22		
LEAR	LR-23	AD01	4		
LEAR	LR-24	AD41	392	243	*
LEAR	LR-24	NA01	250	250	
LEAR	LR-24	LK01	240		
LEAR	LR-24	BU21	237		
LEAR	LR-24	JN01	228	8	*
LEAR	LR-24	RG01	173		
LEAR	LR-24	FI01	79		
LEAR	LR-24	BU01	68		
LEAR	LR-24	AD01	8		
LEAR	LR-24	AD21	5		
LEAR	LR-25	AD41	680	341	*
LEAR	LR-25	NA01	343	343	
LEAR	LR-25	LK01	331		
LEAR	LR-25	JN01	328	3	*
LEAR	LR-25	BU21	328		
LEAR	LR-25	RG01	240		
LEAR	LR-25	BU01	121		
LEAR	LR-25	FI01	120		
LEAR	LR-25	AD21	8		
LEAR	LR-25	AD01	7		
LEAR	LR-28	AD41	8	4	*
LEAR	LR-28	NA01	5	5	
LEAR	LR-28	LK01	5		
LEAR	LR-28	JN01	5	1	*
LEAR	LR-28	BU21	5		
LEAR	LR-28	RG01	3		
LEAR	LR-29	NA01	4	4	
LEAR	LR-29	LK01	4		
LEAR	LR-29	JN01	4	2	*
LEAR	LR-29	BU21	4		
LEAR	LR-29	AD41	4	2	*
LEAR	LR-31	AD41	88	54	*
LEAR	LR-31	NA01	55	55	
LEAR	LR-31	BU21	55		
LEAR	LR-31	JN01	54	1	*
LEAR	LR-31	LK01	51		
LEAR	LR-31	RG01	32		
LEAR	LR-31	FI01	9		
LEAR	LR-31	BU01	9		
LEAR	LR-31	AD21	1		
LEAR	LR-35	AD41	1,142	568	*
LEAR	LR-35	NA01	658	658	
LEAR	LR-35	JN01	649	90	*
LEAR	LR-35	BU21	649		
LEAR	LR-35	LK01	646		
LEAR	LR-35	RG01	434		
LEAR	LR-35	FI01	164		
LEAR	LR-35	BU01	156		
LEAR	LR-35	AD21	40		
LEAR	LR-35	AD01	19		
LEAR	LR-36	AD41	114	57	*
LEAR	LR-36	BU21	59		
LEAR	LR-36	NA01	58	58	
LEAR	LR-36	JN01	58	1	*
LEAR	LR-36	LK01	57		
LEAR	LR-36	RG01	36		
LEAR	LR-36	BU01	23		
LEAR	LR-36	FI01	22		
LEAR	LR-36	AD21	12		
LEAR	LR-36	AD01	2		
LEAR	LR-55	AD41	280	144	*
LEAR	LR-55	NA01	145	145	
LEAR	LR-55	JN01	144	1	*
LEAR	LR-55	BU21	144		
LEAR	LR-55	LK01	142		
LEAR	LR-55	RG01	105		
LEAR	LR-55	BU01	27		
LEAR	LR-55	FI01	20		
LEAR	LR-55	AD21	1		
LEAR	LR-55	AD01	1		
LET	LET-200	NA01	38	38	
LET	LET-200	BU01	38	38	*
LET	LET-200	FI01	17		
LET	LET-410	NA01	986	986	
LET	LET-410	LK01	986	986	*
LET	LET-410	BU01	678		
LET	LET-410	AD01	584		
LET	LET-410	FI01	80		
LET	LET-610	NA01	4	4	
LET	LET-610	BU01	4	4	*

LET	LET-610	FI01	3		
LKHEED	L-1011	NA01	242	242	
LKHEED	L-1011	LK01	242		*
LKHEED	L-1011	FI01	242		
LKHEED	L-1011	AD01	242	242	*
LKHEED	L-1011	AR01	240		
LKHEED	L-1011	BU01	235		
LKHEED	L-1011	RG01	115		
LKHEED	L-1011	AD21	14		
LKHEED	L-1011	BU21	2		
LKHEED	L-1011	AD41	2		
LKHEED	L-1049	RG01	14		
LKHEED	L-1049	NA01	11	11	
LKHEED	L-1049	LK01	10	10	*
LKHEED	L-1049	FI01	3		
LKHEED	L-1049	BU01	3	1	*
LKHEED	L-1329	AD41	264		
LKHEED	L-1329	NA01	193	193	
LKHEED	L-1329	BU21	160	38	
LKHEED	L-1329	LK01	148	9	*
LKHEED	L-1329	JN01	146	146	*
LKHEED	L-1329	RG01	110		
LKHEED	L-1329	BU01	39		
LKHEED	L-1329	FI01	38		
LKHEED	L-1329	AD01	7		
LKHEED	L-1329	AD21	2		
LKHEED	L-1649	RG01	5		
LKHEED	L-1649	NA01	3	3	
LKHEED	L-1649	LK01	3	3	*
LKHEED	L-188	NA01	97	97	
LKHEED	L-188	LK01	94	15	*
LKHEED	L-188	FI01	86		
LKHEED	L-188	AD01	82	82	*
LKHEED	L-188	BU01	73		
LKHEED	L-188	RG01	49		
LKHEED	L-188	AD41	6		
LKHEED	L-188	AD21	1		
LKHEED	L-382	NA01	1,713	1,713	
LKHEED	L-382	LK01	1,713	1,594	*
LKHEED	L-382	BU01	120	119	*
LKHEED	L-382	FI01	116		
LKHEED	L-382	AD01	94		
LKHEED	L-382	RG01	57		
LKHEED	L-382	AD21	1		
LKHEED	L-49	RG01	9		
LKHEED	L-49	NA01	6	6	
LKHEED	L-49	LK01	6	4	*
LKHEED	L-49	FI01	2	2	*
LKHEED	L-49	BU01	1		
LKHEED	L-49	AD21	1		
LKHEED	P-2V	RG01	56		
LKHEED	P-2V	NA01	38	38	
LKHEED	P-2V	BU01	38	38	*
LKHEED	P-2V	FI01	13		*
LKHEED	P-2V	AD21	2		
MACCHI	AL-60	NA01	6	6	
MACCHI	AL-60	FI01	6	6	*
MACCHI	AL-60	BU01	5		
MACCHI	AL-60	RG01	4		
MARTIN	M-404	RG01	36		
MARTIN	M-404	NA01	26	26	
MARTIN	M-404	LK01	24	20	*
MARTIN	M-404	FI01	6	6	*
MARTIN	M-404	BU01	5		
MIL	MI-2	NA01	139	139	
MIL	MI-2	BU01	132	132	*
MIL	MI-2	FI01	63	7	*
MIL	MI-8	NA01	49	49	
MIL	MI-8	BU01	48	48	*
MIL	MI-8	FI01	36	1	*
MNSLNR	MS-760	AD41	44	21	*
MNSLNR	MS-760	BU21	25		
MNSLNR	MS-760	NA01	21	21	
MNSLNR	MS-760	RG01	17		
MNSLNR	MS-760	FI01	2		
MOONEY	MOONEY-M20C	RG01	1,669		
MOONEY	MOONEY-M20C	AD21	106		
MOONEY	MOONEY-M20C	NA01	3	3	
MOONEY	MOONEY-M20C	FI01	3	3	*
MRCHTI	MRCHTI-SF	AD01	7		
MRCHTI	MRCHTI-SF	AD41	6	6	*
MRCHTI	MRCHTI-SF	NA01	3	3	
MTSBSI	MU-2B	AD41	1,018	606	*
MTSBSI	MU-2B	NA01	670	670	
MTSBSI	MU-2B	JN01	599	65	*
MTSBSI	MU-2B	RG01	457		
MTSBSI	MU-2B	FI01	174		
MTSBSI	MU-2B	BU01	154		
MTSBSI	MU-2B	AD01	21		
MTSBSI	MU-2B	AD21	3		
MTSBSI	MU-300	NA01	95	95	
MTSBSI	MU-300	JN01	95	3	*
MTSBSI	MU-300	BU21	95		
MTSBSI	MU-300	LK01	94		
MTSBSI	MU-300	AD41	94	94	*
MTSBSI	MU-300	RG01	78		
MTSBSI	MU-300	BU01	15		
MTSBSI	MU-300	FI01	14		
NAMER	NA-265	AD41	760		
NAMER	NA-265	NA01	597	597	
NAMER	NA-265	BU21	590	150	
NAMER	NA-265	LK01	440	440	*
NAMER	NA-265	JN01	409	7	*
NAMER	NA-265	RG01	153		
NAMER	NA-265	FI01	44		
NAMER	NA-265	BU01	37		
NAMER	NA-265	AD01	3		
NAMER	NA-B25	RG01	64		
NAMER	NA-B25	AD21	10		
NAMER	NA-B25	NA01	3	3	
NAMER	NA-B25	BU01	3	3	*
NIHON	YS-11	NA01	37	37	
NIHON	YS-11	LK01	36	11	*
NIHON	YS-11	FI01	29		
NIHON	YS-11	AD01	26	26	*
NIHON	YS-11	BU01	19		
NIHON	YS-11	RG01	7		
NIHON	YS-11A	NA01	114	114	
NIHON	YS-11A	LK01	113	21	*

NIHON	YS-11A	AD01	93	93	*
NIHON	YS-11A	FI01	74		
NIHON	YS-11A	BU01	70		
NIHON	YS-11A	RG01	34		
NIHON	YS-11A	AD41	2		
NOORDN	AT-16	AD21	5		
NOORDN	AT-16	NA01	4	4	
NOORDN	AT-16	BU01	4	4	*
NOORDN	UC-64	AD21	70		
NOORDN	UC-64	NA01	22	22	
NOORDN	UC-64	FI01	21	2	*
NOORDN	UC-64	BU01	20	20	*
NOORDN	UC-64	RG01	8		
NORD	NORD-262	NA01	96	96	
NORD	NORD-262	LK01	95	56	*
NORD	NORD-262	AD01	40	40	*
NORD	NORD-262	FI01	28		
NORD	NORD-262	BU01	24		
NORD	NORD-262	RG01	14		
NORD	NORD-262	AD41	10		
NORD	NORD-262	BU21	5		
NORD	NORD-262	AD21	4		
PARTEN	AP-68TP	AD41	24	12	*
PARTEN	AP-68TP	NA01	12	12	
PARTEN	AP-68TP	FI01	6		*
PARTEN	AP-68TP	RG01	3		
PARTEN	AP-68TP	BU01	3		
PARTEN	AP-68TP	AD01	1		
PARTEN	P-68	NA01	96	96	
PARTEN	P-68	BU01	84	84	*
PARTEN	P-68	FI01	77	12	*
PARTEN	P-68	RG01	51		
PARTEN	P-68	AD21	4		
PIAGIO	P-166	AD41	10	5	*
PIAGIO	P-166	NA01	5	5	
PIAGIO	P-166	RG01	4		
PIAGIO	P-166	FI01	4		*
PIAGIO	P-166	AD21	1		
PIAGIO	P-180	NA01	15	15	
PIAGIO	P-180	JN01	15	3	*
PIAGIO	P-180	AD41	12	12	*
PIAGIO	P-180	RG01	5		
PIAGIO	P-180	BU01	3		
PIAGIO	P-180	AD21	2		
PILATS	PC-6	AD41	102	49	*
PILATS	PC-6	NA01	89	89	
PILATS	PC-6	FI01	56	40	*
PILATS	PC-6	BU01	40		
PILATS	PC-6	AD01	30		
PILATS	PC-6	RG01	29		
PILATS	PC-6	AD21	4		
PIPER	PA-18	RG01	3,897		
PIPER	PA-18	AD21	531		
PIPER	PA-18	NA01	18	18	
PIPER	PA-18	FI01	18	18	*
PIPER	PA-20	RG01	513		
PIPER	PA-20	NA01	84	84	
PIPER	PA-20	AD21	84	84	*

PIPER	PA-23	RG01	3,663		
PIPER	PA-23	NA01	462	462	
PIPER	PA-23	FI01	426	426	*
PIPER	PA-23	AD21	392		
PIPER	PA-23	BU01	356	36	*
PIPER	PA-25	RG01	1,264		
PIPER	PA-25	AD21	232		
PIPER	PA-25	NA01	12	12	
PIPER	PA-25	FI01	12	12	*
PIPER	PA-28	RG01	[illegible]		
PIPER	PA-28	AD21	2,191		
PIPER	PA-28	NA01	76	76	
PIPER	PA-28	FI01	71	71	*
PIPER	PA-28	BU01	12	5	*
PIPER	PA-30	RG01	1,221		
PIPER	PA-30	AD21	150		
PIPER	PA-30	NA01	45	45	
PIPER	PA-30	FI01	38	38	*
PIPER	PA-30	BU01	3[illegible]	7	*
PIPER	PA-31	RG01	2,408		
PIPER	PA-31	AD41	1,547		
PIPER	PA-31	NA01	1,203	1,203	
PIPER	PA-31	FI01	1,049	1,049	*
PIPER	PA-31	BU01	1,045	154	*
PIPER	PA-31	JN01	732		
PIPER	PA-31	AD21	511		
PIPER	PA-31	AD01	32		
PIPER	PA-32	RG01	4,420		
PIPER	PA-32	AD21	340		
PIPER	PA-32	NA01	300	300	
PIPER	PA-32	BU01	268	51	*
PIPER	PA-32	FI01	249	249	*
PIPER	PA-34	RG01	1,861		
PIPER	PA-34	NA01	365	365	
PIPER	PA-34	FI01	302	301	*
PIPER	PA-34	BU01	283	64	*
PIPER	PA-34	AD21	219		
PIPER	PA-38	RG01	1,249		
PIPER	PA-38	AD21	131		
PIPER	PA-38	NA01	12	12	
PIPER	PA-38	FI01	12	12	*
PIPER	PA-42	NA01	191	191	
PIPER	PA-42	JN01	189	10	*
PIPER	PA-42	AD41	181	181	*
PIPER	PA-42	RG01	98		
PIPER	PA-42	BU01	50		
PIPER	PA-42	FI01	45		
PIPER	PA-42	AD21	13		
PIPER	PA-42	AD01	3		
PIPER	PA-44	RG01	317		
PIPER	PA-44	AD21	55		
PIPER	PA-44	NA01	38	38	
PIPER	PA-44	FI01	35	35	*
PIPER	PA-44	BU01	25	3	*
PIPER	PA-46	RG01	379		
PIPER	PA-46	NA01	34	34	
PIPER	PA-46	AD21	21	20	*
PIPER	PA-46	BU01	14	14	*
PIPER	PA-46	FI01	6		
PIPER	PA-60	RG01	400		
PIPER	PA-60	AD21	143		
PIPER	PA-60	NA01	116	116	
PIPER	PA-60	FI01	106	10	*
PIPER	PA-60	BU01	106	106	*

PLZ	AN-2	NA01	5	5	
PLZ	AN-2	BU01	5	5	*
RKWELL	RKWELL-S2	RG01	238		
RKWELL	RKWELL-S2	FI01	28		
RKWELL	RKWELL-S2	NA01	23	23	
RKWELL	RKWELL-S2	BU01	23	23	*
RKWELL	RKWELL-S2	AD21	1		
ROBSIN	R-22	RG01	762		
ROBSIN	R-22	AD21	279		
ROBSIN	R-22	NA01	29	29	
ROBSIN	R-22	FI01	29	29	*
SAAB	SF-340	NA01	304	304	
SAAB	SF-340	LK01	301	3	*
SAAB	SF-340	AD01	301	301	*
SAAB	SF-340	BU01	289		
SAAB	SF-340	AR01	288		
SAAB	SF-340	FI01	287		
SAAB	SF-340	RG01	176		
SAAB	SF-340	AD21	8		
SKRSKY	SK-55	RG01	63		
SKRSKY	SK-55	FI01	22	20	*
SKRSKY	SK-55	NA01	21	21	
SKRSKY	SK-55	BU01	19	1	*
SKRSKY	SK-55	AD21	6		
SKRSKY	SK-58	RG01	166		
SKRSKY	SK-58	NA01	64	64	
SKRSKY	SK-58	FI01	64	11	*
SKRSKY	SK-58	BU01	53	53	*
SKRSKY	SK-58	AD21	9		
SKRSKY	SK-61	NA01	110	110	
SKRSKY	SK-61	BU01	106	6	*
SKRSKY	SK-61	FI01	104	104	*
SKRSKY	SK-61	RG01	26		
SKRSKY	SK-61	AD21	11		
SKRSKY	SK-62	RG01	5		
SKRSKY	SK-62	NA01	3	3	
SKRSKY	SK-62	FI01	3	3	*
SKRSKY	SK-62	BU01	3		*
SKRSKY	SK-64	NA01	8	8	
SKRSKY	SK-64	FI01	8	2	*
SKRSKY	SK-64	RG01	7		
SKRSKY	SK-64	BU01	6	6	*
SKRSKY	SK-64	AD21	1		
SKRSKY	SK-76	RG01	169		
SKRSKY	SK-76	NA01	137	137	
SKRSKY	SK-76	BU01	131	13	*
SKRSKY	SK-76	FI01	129	124	*
SKRSKY	SK-76	AD21	35		
SNIAS	AS-350	RG01	149		
SNIAS	AS-350	NA01	1	1	
SNIAS	AS-350	FI01	1	1	*
SNIAS	SA-318	NA01	25	25	
SNIAS	SA-318	RG01	21		
SNIAS	SA-330	NA01	60	60	
SNIAS	SA-330	BU01	54	9	*
SNIAS	SA-330	RG01	2		
SNIAS	SA-341	NA01	23	23	
SNIAS	SA-341	BU01	16	3	*
SNIAS	SA-342	NA01	7	7	
SNIAS	SA-342	BU01	7	7	*
SNIAS	SE-313	NA01	37	37	
SNIAS	SE-313	BU01	31	31	*
SNIAS	SE-313	FI01	30	6	*
SNIAS	SE-313	RG01	3		
SOCATA	TB-20	RG01	151		
SOCATA	TB-20	AD21	28		
SOCATA	TB-20	NA01	4	4	
SOCATA	TB-20	BU01	4	4	*
SOCATA	TB-20	FI01	3		
SOCATA	TBM-700	AD41	86	42	*
SOCATA	TBM-700	NA01	42	42	
SOCATA	TBM-700	RG01	27		
SOCATA	TBM-700	BU01	1		
STBROS	SC-5	NA01	5	5	
STBROS	SC-5	AD01	5	5	*
STBROS	SC-5	FI01	3		*
STBROS	SC-5	BU01	3		
STBROS	SC-7	NA01	124	124	
STBROS	SC-7	LK01	121	67	*
STBROS	SC-7	AD01	57	57	*
STBROS	SC-7	AD41	46		
STBROS	SC-7	FI01	44		
STBROS	SC-7	BU01	42		
STBROS	SC-7	RG01	20		
STBROS	SC-7	AD21	2		
STBROS	SD-3	NA01	299	299	
STBROS	SD-3	LK01	297	31	*
STBROS	SD-3	AD01	268	268	*
STBROS	SD-3	AR01	250		
STBROS	SD-3	FI01	221		
STBROS	SD-3	BU01	193		
STBROS	SD-3	RG01	141		
STBROS	SD-3	AD21	17		
STOLAM	RC-3	RG01	234		
STOLAM	RC-3	AD21	76		
STOLAM	RC-3	NA01	6	6	
STOLAM	RC-3	BU01	6	6	*
SUD	SA-316	RG01	8		
SWRNGN	SA-226	NA01	387	387	
SWRNGN	SA-226	AD41	372	186	*
SWRNGN	SA-226	LK01	371	201	*
SWRNGN	SA-226	RG01	210		
SWRNGN	SA-226	AD01	188		
SWRNGN	SA-226	FI01	182		
SWRNGN	SA-226	BU01	152		
SWRNGN	SA-226	JN01	142		
SWRNGN	SA-226	AD21	59		
SWRNGN	SA-227	NA01	378	378	
SWRNGN	SA-227	LK01	374	86	*
SWRNGN	SA-227	AD01	292	292	*
SWRNGN	SA-227	RG01	279		
SWRNGN	SA-227	FI01	259		
SWRNGN	SA-227	BU01	250		
SWRNGN	SA-227	AD41	73		

SWRNGN	SA-227	JN01	35		
SWRNGN	SA-227	AD21	1		
SWRNGN	SA-26	AD41	202	101	*
SWRNGN	SA-26	NA01	101	101	
SWRNGN	SA-26	RG01	87		
SWRNGN	SA-26	JN01	82		
SWRNGN	SA-26	BU01	20		*
SWRNGN	SA-26	FI01	17		
SWRNGN	SA-26	AD21	12		
SWRNGN	SA-26	AD01	9		
TRANS	TRANS-C	NA01	8	8	
TRANS	TRANS-C	FI01	8		
TRANS	TRANS-C	AD01	8	8	*
TUPOLV	TU-134	NA01	570	570	
TUPOLV	TU-134	LK01	570	570	*
TUPOLV	TU-134	AD01	546		
TUPOLV	TU-134	FI01	260		
TUPOLV	TU-134	BU01	155		
TUPOLV	TU-154	NA01	774	774	
TUPOLV	TU-154	LK01	774	774	*
TUPOLV	TU-154	AD01	753		
TUPOLV	TU-154	FI01	719		
TUPOLV	TU-154	BU01	716		
VFW	VFW-614	NA01	4	4	
VFW	VFW-614	LK01	4		*
VFW	VFW-614	FI01	4		
VFW	VFW-614	BU21	4		
VFW	VFW-614	BU01	4	4	*
VICKER	VC-10	NA01	32	32	
VICKER	VC-10	LK01	32	19	*
VICKER	VC-10	BU01	13	13	*
VICKER	VK-745	NA01	73	73	
VICKER	VK-745	LK01	73	73	*
VICKER	VK-745	AD01	53		
VICKER	VK-745	FI01	50		
VICKER	VK-745	BU01	29		
VICKER	VK-745	RG01	17		
VICKER	VK-745	AD21	4		
VICKER	VK-745	AD41	1		
VICKER	VK-900	NA01	7	7	
VICKER	VK-900	LK01	7	1	*
VICKER	VK-900	FI01	6		
VICKER	VK-900	AR01	6	6	*
VICKER	VK-900	AD01	4		
VICKER	VK-900	BU01	3		
WESTLD	WESTLD-30	NA01	22	22	
WESTLD	WESTLD-30	FI01	22		*
WESTLD	WESTLD-30	BU01	22	22	*
WESTLD	WESTLD-30	RG01	9		
WESTLD	WESTLD-71	NA01	2	2	
WESTLD	WESTLD-71	FI01	2		*
WESTLD	WESTLD-71	BU01	2	2	*
YAK	YAK-40	NA01	514	514	
YAK	YAK-40	LK01	514	514	*
YAK	YAK-40	AD01	213		
YAK	YAK-40	FI01	123		
YAK	YAK-40	BU01	121		
YAK	YAK-42	LK01	98		
YAK	YAK-42	NA01	83	83	
YAK	YAK-42	AD01	83	83	*
YAK	YAK-42	BU01	54		
YAK	YAK-42	FI01	37		
YUN	YUN-Y11	FI01	15		
YUN	YUN-Y11	NA01	4	4	
YUN	YUN-Y11	BU01	4	4	*
YUN	YUN-Y12	FI01	22		
YUN	YUN-Y12	NA01	21	21	
YUN	YUN-Y12	BU01	21	21	*
YUN	YUN-Y12	AD01	2		
YUN	YUN-Y5	NA01	51	51	
YUN	YUN-Y5	BU01	51	51	*
YUN	YUN-Y7	NA01	67	67	
YUN	YUN-Y7	LK01	67		
YUN	YUN-Y7	BU01	67	67	*
YUN	YUN-Y7	AD01	65		
YUN	YUN-Y7	FI01	21		

Appendix B

Major Tables For IAOIS Database

The following information lists all the tables that are used in the IAOIS database.

Table descriptions

NA0X	NIAR master table
AR0X	Aviation Research - aircraft database
AD0X	Aviation Data Services - aircraft database
AD2X	Aviation Data Services - Canadian and Australian registeries
AD4X	Aviation Data Services - business aircraft database
FI0X	Forecast International aircraft database
BU0X	Bucher Publications
JN0X	Jetnet - business aviation database
LK0X	Lundkvist Aviation

Table overview

- The current IOAIS Database Inventory includes 10 major vendor supplied tables and 70+ tables supplied and maintained by the analysts. All of the following indented table names are either created or maintained by the analysts.
- Table names follow a predictable pattern. The first aircraft table for a vendor is XX01 where XX = an abbreviation of the vendor name. If a vendor has multiple aircraft tables then the following tables will be XX21 .. XX41 .. etc. All Aic_code XRF-tables will be XX08 .. XX28 .. XX48. All Engine XRF-tables will be XX07 .. XX27 .. XX47. Within like tables for each vendor, the Column Names are the same for the same kinds of data. This means that data pertaining to a manufacture code will be called Mfr_code in any of the 70 tables. See Section on Data Field Names for a complete listing of all column names and their descriptions. See section on Table Linkages for a complete view of linkage relationships between tables.

Avdata Inc.

AD01	Aircarrier fleet
AD02	Country Xrf
AD03	ASAS (subset of NA01 for AD01)
AD04	Mfr Xrf
AD05	State Xrf
AD07	ASAS Engine Xrf
AD08	ASAS Aic Xrf
AD11	Operators
AD21	Civil registeries of Canada & Australia
AD22	Country Xrf
AD23	Mfr Xrf

	AD27	ASAS Engine Xrf
	AD28	ASAS Aic Xrf
	AD31	Owners
AD41	Corporate fleet	
	AD43	ASAS speedo table (subset of NA01 for AD41)
	AD48	ASAS Aic Xrf
	AD51	Operators

Aviation Research

AR01	Aircarrier fleet	
	AR02	Country Xrf
	AR03	ASAS speedo table (subset of NA01 for AR01)
	AR07	ASAS Engine Xrf
	AR08	ASAS Aic Xrf
AR11		Operators

Bucher Aviation

BU01		Aircraft Inventory
	BU02	Country Xrf
	BU03	Mfr speedo table (subset of NA01 for BU01)
	BU07	ASAS Engine Xrf
BU08		ASAS Aic Xrf
BU11	Operators	
BU21		Corporate fleet
	BU22	Country Xrf
BU26		History data
BU28		ASAS Aic Xrf

Forecast International

FI01	Aircraft Inventory	
	FI02	Country Xrf
	FI03	ASAS speedo table (subset of NA01 for FI01)
	FI05	State Xrf
	FI07	ASAS Engine Xrf
FI08		ASAS Aic Xrf
FI11		Operators

Jetnet

JN01 Corporate fleet	
JN02	Country Xrf
JN03	ASAS speedo table (subset of NA01 for JN01)
JN08	ASAS Aic Xrf
JN11	Operators

Lundkvist Aviation

LK01	Aircraft Inventory
LK01_HIST	Aircraft Inventory History
LK02	Country Xrf
LK03	Mfr Xrf
LK04	Modelcode/Name Xrf
LK05	State Xrf
LK07	ASAS Engine Xrf
LK08	ASAS Aic Xrf
LK11	Operators
LK13	Operator/iata/icao Xrf
LK14	Mfr/Model-series speedo (subset of NA01 for Lk11)

Airpac (modified FAA Registry data)

RG01	FAA Registration Master
RG07	FAA Engine Reference
RG08	FAA Aircraft Reference
RG11	Operators

FAA

AS01 ASAS Aircraft Codes	
AS02	ASAS Mfr names
AS03	ASAS Mfr/Model Xrf
AS04	NIAR vendor/model Xrf
AS05	ASAS State Xrf
AS06	NIAR Prime vendors
AS07	NIAR City/State/Co
AS21	ASAS Engine Codes
AS22	ASAS Engine Mfr names
AS23	ASAS Engine Mfr/Model Xrf

International Air Transport Association (IATA)

IA01 Iata Companies and Addresses

IA05 Country/Region Xrf

NIAR

NA01	Master Aircraft data
NA02	Major Fips/Country Table
NA03	Tail Number by Country
NA04	Region Name by Region Code (for NA02)
NA05	Continent Name by Continent Code (for NA02)
NA11	Master Operator data
NA15	Master Aircraft Weight data
NA16	Master Aircraft Seat data

Appendix C

Column Descriptions Information

The following information lists all the columns by table and gives a brief description of the data content and linkage to other tables.

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
AD01	1	OP_CODE	CHAR	30			Y	NIAR Operator Code (link to AD11)
	2	OW_CODE	CHAR	30			Y	NIAR Owner Code (link to AD11)
	3	NIAR_KEY	CHAR	22			Y	NIAR Master Key (made from AIC_MODEL & NIAR_CODE, link to NA01)
	4	MFR_NAME	CHAR	40			Y	Aircraft Manufacturer Name
	5	MODEL_SERIES	CHAR	40			Y	Aircraft Model Series (link to AD08)
	6	SERIAL	CHAR	15			Y	Aircraft Serial Number (Construction Number)
	7	NIAR_CODE	CHAR	15			Y	Normalized serial number made by NIAR staff
	8	REG	CHAR	15			Y	Aircraft Registration Number assigned by Country of registry (link to RG01)
	9	LINE	CHAR	6			Y	Fuselage Number (production line number assigned by manu facturer)
	10	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
	11	ACQ_DATE	DATE	7			Y	Acquisition Date
	12	LUPDATE	DATE	7			Y	Last up date
	13	ACQ_DATE_C	CHAR	10			Y	Acquisition Date in character
	14	LUPDATE_C	CHAR	10			Y	Last up date in character
	15	ENGMFR_NAME	CHAR	30			Y	Aircraft Engine Manufacturer Name (link to AD07)
	16	ENGINE	CHAR	25			Y	Aircraft Engine Series (link to AD07)
	17	STATUS	CHAR	1			Y	Current owner Status Code 1=new,2=used,3=out of service,4=w/drawn,5=destroy
	18	REC_STAT	CHAR	1			Y	Record Status 1=Addition,2=Adminstrative change,3=Owner change,5=Deleted
	19	NIAR_STATUS	CHAR	1			Y	NIAR Aircraft Status (A = Active, Null = Optioned,Destroyed or Salvage)
	20	OPERATOR	CHAR	50			Y	Operator is a Company or Individual operating the Aircraft
	21	OP_ADDR	CHAR	35			Y	Aircraft Operator Address 1
	22	OP_ADDR2	CHAR	35			Y	Aircraft Operator Address 2
	23	OP_CITY	CHAR	30			Y	Aircraft Operator City
	24	OP_STATE	CHAR	2			Y	Aircraft Operator State (link to AD05)
	25	OP_ZIP	CHAR	9			Y	Aircraft Operator ZIP_CODE for USA address only
	26	OP_COUNTRY	CHAR	30			Y	Aircraft Operator Country (link to AD02)
	27	OP_PHONE	CHAR	20			Y	Aircraft Operator telephone number
	28	OP_FAX	CHAR	20			Y	Aircraft Operator FAX or Telex Number
	29	OWNER	CHAR	50			Y	Legal Owner of A/C (may be a Bank or a Company that leases the A/C)
	30	OW_ADDR	CHAR	35			Y	Aircraft Owner Address 1
	31	OW_ADDR2	CHAR	35			Y	Aircraft Owner Address 2
	32	OW_CITY	CHAR	30			Y	Aircraft Owner City
	33	OW_STATE	CHAR	2			Y	Aircraft Owner State (link to AD05)
	34	OW_ZIP	CHAR	9			Y	Aircraft Owner ZIP_CODE for USA address only
	35	OW_COUNTRY	CHAR	30			Y	Aircraft Owner Country (link to AD02)
	36	OW_PHONE	CHAR	20			Y	Aircraft Owner Telephone Number
	37	OW_FAX	CHAR	20			Y	Aircraft Owner FAX Number or TELEX Number
AD02	1	COUNTRY	CHAR	30			N	Name of Country (link to AD01)
	2	FIPS_CODE	CHAR	2			Y	Two digit US Federal code for Country (link to NA02)
AD03	1	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code
	2	AIC_CODE	CHAR	26			N	The most unique grouping of Aircraft Model as described by AS01
	3	AIC_MODEL	CHAR	13			Y	The most generic grouping of Aircraft Model as described by AS01

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
AD03	4	POP_NAME	CHAR	20			Y	Popular Name
	5	CNT	NUMBER	22			Y	Number of Aircraft with that AIC_CODE in AD01
AD04	1	MFR_NAME	CHAR	30			Y	Aircraft Manufacturer Name
	2	ASAS_MFR_CODE	CHAR	6			Y	Manufacturer Code (ASAS used in AD01)
	3	CNT	NUMBER	22			Y	Number of Aircraft with that MFR_CODE in AD01
AD05	1	STATE	CHAR	2			Y	2 letter abbrevation for States and Provinces (link to AD11)
	2	STATE_CODE	CHAR	2			Y	2 letter abbrevation for States and Provinces
AD07	1	MFR_NAME	CHAR	30			Y	Aircraft Manufacturer Name (link to AD01)
	2	ENGINE_SERIES	CHAR	25			Y	Engine Series (link to AD01)
	3	EIC_CODE	CHAR	20			Y	ASAS Engine identification code (link to AS21)
	4	CNT	NUMBER	22			Y	Number of Aircraft with that ENGINE_SERIES in AD01
	5	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code
	6	CNT41	NUMBER	22			Y	Number of Aircraft with that ENGINE_SERIES in AD41
	7	CNT_LMT	NUMBER	22			Y	Number of A/C with that ENGINE_SERIES in AD01 last month
	8	CNT41_LMT	NUMBER	22			Y	Number of A/C with that ENGINE_SERIES in AD41 last month
AD08	1	MFR_NAME	CHAR	40			Y	Aircraft Manufacturer Name
	2	MODEL_SERIES	CHAR	40			Y	Aircraft Model Series (link to AD08)
	3	AIC_CODE	CHAR	26			Y	The most unique grouping of A/C Model as described by AS01 (link to AS01)
	4	CNT	NUMBER	22			Y	Number of Aircraft with that type of MODEL_SERIES in AD01
	5	CNT_LMT	NUMBER	22			Y	Number of Aircraft with that type of MODEL_SERIES in AD01 last month
AD11	1	OP_CODE	CHAR	30			N	NIAR Operator Code (link to AD01)
	2	CO_NAME	CHAR	50			Y	Company Name
	3	ICAO_CODE	CHAR	3			Y	Official three letter ICAO Code for Operator
	4	ADDR	CHAR	35			Y	Aircraft Operator Address 1
	5	ADDR2	CHAR	35			Y	Aircraft Operator Address 2
	6	CITY	CHAR	30			Y	Aircraft Operator City
	7	STATE	CHAR	2			Y	Aircraft Operator State (link to AD05)
	8	POST	CHAR	12			Y	Aircraft Operator Post Office Box
	9	COUNTRY_CODE	CHAR	2			Y	Two digit code for Country
	10	PHONE	CHAR	20			Y	Aircraft Operator Telephone Number
	11	FAX	CHAR	20			Y	Aircraft Operator Fax Number
	12	CNT	NUMBER	22			Y	Number of Aircraft with that CO_NAME in AD01
	13	NIAR_STATUS	CHAR	1			Y	NIAR Aircraft Status
AD21	1	NIAR_FILE_ID	CHAR	1			Y	Denotes if the Aircraft is from Canada or Australia registry
	2	NIAR_CONFIG	CHAR	4			Y	Indicates other use then for passanger or Exact seat if available
	3	NIAR_MISSION	CHAR	6			Y	NIAR A/C Mission Transport,Patrol, Commuter, Tour, Packaged Freight
	4	NIAR_STATUS	CHAR	1			Y	Niar Aircraft Status
	5	NIAR_CODE	CHAR	15			Y	Normalized serial number made by NIAR staff
	6	NIAR_KEY	CHAR	22			Y	NIAR Master Key (made from AIC_MODEL and NIAR_CODE, link to NA01)
	7	OP_CODE	CHAR	30			Y	NIAR Operator Code (link to AD31)

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
AD21	8	OW_CODE	CHAR	30			Y	NIAR Owner Code (link to AD31)
	9	OPERATOR	CHAR	50			Y	Aircraft Operator (Company or Individual Operating the Aircraft)
	10	OP_ADDR	CHAR	35			Y	Aircraft Operator Address 1
	11	OP_ADDR2	CHAR	35			Y	Aircraft Operator address 2
	12	OP_CITY	CHAR	30			Y	Aircraft Operator City
	13	OP_STATE	CHAR	2			Y	Aircraft Operator State
	14	OP_ZIP	CHAR	9			Y	Aircraft Operator ZIP-CODE for USA address only
	15	OP_COUNTRY	CHAR	30			Y	Aircraft Operator Country (link to AD22)
	16	OP_PHONE	CHAR	20			Y	Aircraft Operator Telephone Number
	17	OP_FAX	CHAR	20			Y	Aircraft Operator FAX Number
	18	MFR_NAME	CHAR	40			Y	Aircraft Manufacturer Name
	19	MODEL_SERIES	CHAR	40			Y	Aircraft Model Series (link to AD28)
	20	SERIAL	CHAR	15			Y	Aircraft Serial Number (Construction Number)
	21	REG	CHAR	15			Y	Aircraft Registration Number assigned by Country of registry
	22	LINE	CHAR	6			Y	Fuselage Number (production line number assigned by manufacturer)
	23	OWNER	CHAR	50			Y	Legal Owner of A/C (may be a Bank or a Company that leases the A/C)
	24	OW_ADDR	CHAR	35			Y	Aircraft Owner Address 1
	25	OW_ADDR2	CHAR	35			Y	Aircraft Owner Address 2
	26	OW_CITY	CHAR	30			Y	Aircraft Owner City
	27	OW_STATE	CHAR	2			Y	State the Aircraft Owner islocated
	28	OW_ZIP	CHAR	9			Y	Aircraft Owner ZIP_CODE for USA address only
	29	OW_COUNTRY	CHAR	30			Y	Aircraft Owner Country (link to AD22)
	30	OW_PHONE	CHAR	20			Y	Aircraft Owner Telephone Number
	31	OW_FAX	CHAR	20			Y	Aircraft Owner FAX Number
	32	ACQ_DATE_C	CHAR	8			Y	Acquisition Date in Charcter
	33	LUPDATE_C	CHAR	8			Y	Last up date in character
	34	ENGMFR_NAME	CHAR	30			Y	Aircraft Engine Manufacturer Name (link to AD27)
	35	ENGINE	CHAR	25			Y	Aircraft Engine Type (link to AD27)
	36	CATAGORY	CHAR	13			Y	Equipment Category
	37	LUPDATE	DATE	7			Y	Last up date
	38	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code (link to AD28)
	39	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
AD22	1	COUNTRY	CHAR	30			Y	Name of Country (link to AD21)
	2	FIPS_CODE	CHAR	2			Y	Two digit US Federal code for Country (link to NA02)
AD23	1	MFR_NAME	CHAR	40			Y	Aircraft Manufacturer Name
	2	ASAS_MFR_CODE	CHAR	6			Y	ASAS Manufacturer Code (codes used in AD21)
	3	CNT	NUMBER	22			Y	Number of Aircraft with that ASAS_MFR_CODE in AD21
AD27	1	MFR_NAME	CHAR	30			Y	Aircraft Manufacturer Name
	2	ENGINE	CHAR	25			Y	Aircraft Engine Type (link to AD21)
	3	EIC_CODE	CHAR	20			Y	ASAS Engine identification code (link to AS21)
	4	CNT	NUMBER	22			Y	Number of Aircraft with that type of Engine in AD21
	5	CNT_LMT	NUMBER	22			Y	Number of Aircraft with that type of Engine in AD21 last month

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
AD28	1	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code (link to AD21)
	2	MODEL_SERIES	CHAR	40			Y	Aircraft Model Series (link to AD21)
	3	AIC_CODE	CHAR	26			Y	The most unique grouping of A/C Model as described by AS01 (link to AS01)
	4	NIAR_STATUS	CHAR	1			Y	NIAR Aircraft Status
	5	CNT	NUMBER	22			Y	Number of Aircraft with that type of MODEL_SERIES in AD21
	6	CNT_LMT	NUMBER	22			Y	Number of Aircraft with that type MODEL_SERIES in AD21 last month
AD31	1	OW_CODE	CHAR	30			N	NIAR Owner Code (link to AD21)
	2	CO_NAME	CHAR	50			Y	Company name (Company or Individual operating the Aircraft)
	3	ICAO_CODE	CHAR	3			Y	Official three letter ICAO COde for Operator
	4	ADDR	CHAR	35			Y	Aircraft Operator Address 1
	5	ADDR2	CHAR	35			Y	Aircraft Operator Address 2
	6	CITY	CHAR	30			Y	Aircraft Operator City
	7	STATE	CHAR	2			Y	Aircraft Operator State
	8	POST	CHAR	12			Y	Aircraft Operator Post Office Box
	9	COUNTRY_CODE	CHAR	2			Y	Two digit code for Country
	10	PHONE	CHAR	20			Y	Aircraft Operator Telephone Number
	11	FAX	CHAR	20			Y	Aircraft Operator Fax Number
	12	CNT	NUMBER	22			Y	Number of Aircraft with that CO_NAME in AD21
	13	NIAR_STATUS	CHAR	1			Y	NIAR Aircraft Status
AD41	1	OP_CODE	CHAR	30			Y	NIAR Operator Code (link to AD51)
	2	OW_CODE	CHAR	30			Y	NIAR Owner Code (link to AD51)
	3	NIAR_KEY	CHAR	22			Y	NIAR Master Key (made from AIC_MODEL and NIAR_CODE, link to NA01)
	4	NIAR_CODE	CHAR	15			Y	Normalized serial number made by NIAR staff
	5	MFR_NAME	CHAR	40			Y	Aircraft Manufacturer Name
	6	MODEL_SERIES	CHAR	40			Y	Aircraft Model Series (link to AD48)
	7	SERIAL	CHAR	15			Y	Aircraft Serial Number (Construction Number)
	8	REG	CHAR	15			Y	Aircraft Registration Number assigned by Country of registry (link to RG01)
	9	LINE	CHAR	6			Y	Fuselage Number (productionline number assigned by manufacturer)
	10	ACQ_DATE_C	CHAR	10			Y	Acquisition Date in character
	11	LUPDATE_C	CHAR	10			Y	Last up date in character
	12	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
	13	LUPDATE	DATE	7			Y	Last up date
	14	ACQ_DATE	DATE	7			Y	Acquisition Date
	15	ENGMFR_NAME	CHAR	30			Y	Aircraft Engine Manufacturer Name (link to AD07)
	16	ENGINE	CHAR	25			Y	Aircraft Engine Type (link to AD07)
	17	STATUS	CHAR	1			Y	Current owner Status Code 1= New, 2 = Used, 3 = Out ofservice
	18	REC_STAT	CHAR	1			Y	Record Status 1=Added,2=Adminstrative Change, 3=Ownership change,5=Deleted
	19	NIAR_STATUS	CHAR	1			Y	NIAR Aircraft Status
	20	OPERATOR	CHAR	50			Y	Operator Name (Operator is a Company or Individual operating the Aircraft)
	21	OP_ADDR	CHAR	35			Y	Aircraft Operator Address 1
	22	OP_ADDR2	CHAR	35			Y	Aircraft Operator address 2
	23	OP_CITY	CHAR	30			Y	Aircraft Operator City
	24	OP_STATE	CHAR	2			Y	Aircraft Operator State
	25	OP_ZIP	CHAR	9			Y	Aircraft Operator ZIP_CODE for US address onl

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
							y	
AD41	26	OP_POST	CHAR	12			Y	Aircraft Operator Post Office Box Number
	27	OP_COUNTRY	CHAR	30			Y	Aircraft Operator Country (link to AD02)
	28	OP_PHONE	CHAR	20			Y	Aircraft Operator Telephone Number
	29	OP_FAX	CHAR	20			Y	Aircraft Operator FAX Number
	30	OWNER	CHAR	50			Y	Legal Owner of A/C (may be Bank or a Company that leases the A/C)
	31	OW_ADDR	CHAR	35			Y	Aircraft Owner Address 1
	32	OW_ADDR2	CHAR	35			Y	Aircraft Owner Address 2
	33	OW_CITY	CHAR	30			Y	Aircraft Owner City
	34	OW_STATE	CHAR	2			Y	Aircraft Owner State
	35	OW_ZIP	CHAR	9			Y	Aircraft Owner ZIP_CODE for USA address only
	36	OW_POST	CHAR	12			Y	Aircraft Owner Post Office Box
	37	OW_COUNTRY	CHAR	30			Y	Aircraft Owner Country (link to AD02)
	38	OW_PHONE	CHAR	20			Y	Aircraft Owner Telephone Number
	39	OW_FAX	CHAR	20			Y	Aircraft Owner FAX Number
AD43	1	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code
	2	AIC_CODE	CHAR	26			N	The most unique grouping of Aircraft Model as describedby AS01
	3	AIC_MODEL	CHAR	13			Y	The most generic grouping of Aircraft Model a s described by AS01
	4	POP_NAME	CHAR	20			Y	Popular Name
	5	CNT	NUMBER	22			Y	Number of Aircraft with that type AIC_MODEL i n AD41
AD48	1	MFR_NAME	CHAR	40			Y	Aircraft Manufacturer Name
	2	MODEL_SERIES	CHAR	40			Y	Aircraft Model Series (link to AD41)
	3	AIC_CODE	CHAR	26			Y	The most unique grouping of A/C Model as desc ribed by AS01 (link to AS01)
	4	CNT	NUMBER	22			Y	Number of Aircraft with that type MODEL_SERIE S in AD41
	5	CNT_LMT	NUMBER	22			Y	Number of Aircraft with that type of MODEL_SE RIES in AD41 last month
AD51	1	OP_CODE	CHAR	30			N	NIAR Operator Code (link to AD41)
	2	CO_NAME	CHAR	50			Y	Company Name
	3	ICAO_CODE	CHAR	3			Y	Official 3 letter ICAO code for Operator
	4	ADDR	CHAR	35			Y	Aircraft Operator Address 1
	5	ADDR2	CHAR	35			Y	Aircraft Operator Address 2
	6	CITY	CHAR	30			Y	Aircraft Operator City
	7	STATE	CHAR	2			Y	Aircraft Operator State
	8	POST	CHAR	12			Y	Aircraft Operator Post Office Box number
	9	COUNTRY_CODE	CHAR	2			Y	Two Digit Code for Country
	10	PHONE	CHAR	20			Y	Aircraft Operator Telephone Number
	11	FAX	CHAR	20			Y	Aircraft Operator Fax Number
	12	CNT	NUMBER	22			Y	Number of Aircraft with that Operator in AD41
	13	NIAR_STATUS	CHAR	1			Y	NIAR Aircraft Status

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
AR01	1	NIAR_STATUS	CHAR	1			Y	NIAR Aircraft Status
	2	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
	3	NIAR_KEY	CHAR	22			Y	NIAR Master Key (made from AIC_MODEL and NIAR_CODE , link to NA01)
	4	NIAR_CODE	CHAR	15			Y	Normalized serial number made by NIAR staff
	5	MFR_CODE	CHAR	8			Y	ASAS Aircraft Manufacturer Code
	6	MODEL	CHAR	8			Y	ASAS Aircraft Model (Aircraft Type)
	7	MODEL_SERIES	CHAR	14			Y	Aircraft Model Series (link to AR08)
	8	SERIAL	CHAR	7			Y	Aircraft Serial Number (Construction Number)
	9	LINE	CHAR	10			Y	Fuselage Number (production line number assigned by manufacturer)
	10	OP_LINK	CHAR	3			Y	Manufacturer Operator Code
	11	OP_CODE	CHAR	30			Y	NIAR Operator Code
	12	OPERATOR	CHAR	30			Y	Operator is a Company or Individual operating the Aircraft (link to AR11)
	13	ENGMFR_CODE	CHAR	5			Y	Aircraft Engine Manufacturer Code (link to AR07)
	14	ENGINE	CHAR	13			Y	Aircraft Engine Type (link to AR07)
	15	MTOW	NUMBER	22	3		Y	Maximum Take-Off Weight (lbs * 1000)
	16	REG	CHAR	8			Y	Aircraft Registration Number assigned by Country of registry (link to RG01)
	17	REF_DATE	DATE	7			Y	Data Reference Date
	18	CURR_DELIVERY	DATE	7			Y	Current Operator delivery Date
	19	YEAR_MFR	DATE	7			Y	Year the Aircraft was built
	20	AGE	NUMBER	22	5	2	Y	Aircraft Age (To data reference date)
	21	FLIGHT_HRS_TOT	NUMBER	22	8		Y	Cumulative Fuselage Flying Hours(since original delivery date)
	22	CYCLES_TOT	NUMBER	22	8		Y	Cumulative Fuselage Landings (since original delivery date)
	23	FLIGHT_HRS_L12M	NUMBER	22	4		Y	Flying Hours last 12 months
	24	CYCLES_L12M	NUMBER	22	4		Y	Landings (last twelve months)
	25	FLIGHT_HRS_COP	NUMBER	22	6		Y	Total Hours by current Operator
	26	CYCLES_COP	NUMBER	22	6		Y	Total Cycles by current Operator
	27	FL_HRS_COP_L12M	NUMBER	22	4		Y	Flying Hours last twelve months by curret Operator
	28	CYCLES_COP_L12M	NUMBER	22	4		Y	Landings last 12 months by current operator
	29	FLIGHT_HRS_ANN	NUMBER	22	6		Y	Annual Flying Hours (Since original delivery date)
	30	CYCLES_ANN	NUMBER	22	6		Y	Annual Landings (Since original delivery date)
	31	CYCLE_AVE_L12M	NUMBER	22	5	2	Y	Average Cycle or flight Time the last 12 months
	32	CYCLE_AVE_TOT	NUMBER	22	5	2	Y	Average Cycle or Flight Time (since original delivery date)
	33	UTIL_HRS_L12M	NUMBER	22	5	2	Y	Daily Utilization (hours) (last twelve months)
	34	UTIL_HRS_CUM	NUMBER	22	5	2	Y	Daily Utilization (hours) (since original delivery date)
	35	COUNTRY	CHAR	30			Y	Aircraft Operator Country of Origin (link to AR02)
	36	REGION	CHAR	20			Y	Aircraft Operator World Region of Origin
	37	SERVYY	CHAR	4			Y	Original delivery year (first operator)
	38	SERVMM	CHAR	2			Y	Original delivery month (first operator)
	39	SERVDD	CHAR	2			Y	Original delivery day (first operator)
	40	FLIGHT_HRS_MTH	NUMBER	22	4		Y	Month Flying Hours

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
AR01	41	CYCLES_MTH	NUMBER	22	4		Y	Month Landings
	42	STATUS	CHAR	1			Y	Current owner Status Code B=bought;G,R,C=owned;S=storage;X=repossessed
	43	NOISE	CHAR	1			Y	FAR Part 36 Noise Stage Compliance
	44	ROLE	CHAR	1			Y	A/C Operation Role(P=passenger;M=military;F=freighter;U=utility;C=corporate)
	45	SEATS	CHAR	1			Y	Aircraft Seat Code (1=12-19seats;2=20-40;3=41-70;4=71-120;5=121-170 ...)
	46	OP_CHAN	CHAR	1			Y	Denotes whether A/C is new to Operator in Data Reference Month
	47	OW_LEG	CHAR	3			Y	Aircraft Legal Owner (may be bank or holding company)
AR02	1	FIPS_CODE	CHAR	2			Y	Two digit US Federal code for Country (link to NA02)
	2	COUNTRY	CHAR	30			Y	Aircraft Operator Country of Origin (link to AR01 and to AR11)
	3	REGION	CHAR	20			Y	Aircraft Operator World Region of Origin
AR03	1	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code
	2	AIC_CODE	CHAR	26			N	The most unique grouping of Aircraft Model as described by AS01
	3	AIC_MODEL	CHAR	13			Y	The most generic grouping of Aircraft Model as described by AS01
	4	POP_NAME	CHAR	20			Y	Popular Name
	5	CNT	NUMBER	22			Y	Number of Aircraft with that AIC_MODEL in AR01
AR07	1	ENGINE	CHAR	13			Y	Aircraft Engine Type (link to AR01)
	2	ENGMFR_CODE	CHAR	5			Y	Aircraft Engine Manufacturer Code (link to AR01)
	3	EIC_CODE	CHAR	20			Y	ASAS Engine identification code (link to AS21)
	4	CNT	NUMBER	22			Y	Number of Aircraft with that type of Engine in AR01
	5	CNT_LMT	NUMBER	22			Y	Number of Aircraft with type of Engine in AR01 last month
AR08	1	MFR_CODE	CHAR	8			Y	ASAS Aircraft Manufacturer Code
	2	MODEL	CHAR	8			Y	ASAS Aircraft Model (Aircraft Type)
	3	MODEL_SERIES	CHAR	14			Y	Aircraft Model Series (link to AR01)
	4	AIC_CODE	CHAR	26			Y	The most unique grouping of A/C Model as described by AS01 (link to AS01)
	5	CNT	NUMBER	22	5		Y	Number of Aircraft with that Model_Series in AR01
	6	STATUS	CHAR	1			Y	Current owner Status Code B=bought;R,C,G=owned;S=storage;X=repossessed ...
	7	CNT_LMT	NUMBER	22			Y	Number of Aircraft with that Model_series last month
AR11	1	OP_CODE	CHAR	30			Y	NIAR Operator Code
	2	IATA_CODE	CHAR	2			Y	Official IATA two letter code for Operator
	3	IATA_DUP_FLAG	CHAR	1			Y	Dupilcate IATA_CODE marked by *
	4	ICAO_CODE	CHAR	3			Y	Official ICAO 3 letter code for Operator

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
AR11	5	CO_NAME	CHAR	30			Y	Company Name (link to AR01)
	6	ADDR	CHAR	30			Y	Aircraft Operator Address 1
	7	ADDR2	CHAR	30			Y	Aircraft Operator Address 2
	8	ADDR3	CHAR	30			Y	Aircraft Operator Address 3
	9	COUNTRY	CHAR	30			Y	Aircraft Operator Country (link to AR02)
	10	REGION	CHAR	20			Y	Aircraft Operator World Region of Origin
	11	PHONE_M	CHAR	14			Y	Aircraft Operator Telephone Number
	12	PHONE	CHAR	14			Y	Aircraft Operator Telephone Number
	13	FAX_M	CHAR	14			Y	Aircraft Operator Fax Number
	14	FAX	CHAR	14			Y	Aircraft Operator Fax Number
	15	CITY	CHAR	30			Y	Aircraft Operator City Address

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
AS01	1	NIAR_STATUS	CHAR	1			Y	NIAR Aircraft Status (A = Active , Null = Optioned, Destroyed or Salvage)
	2	CNT	NUMBER	22			Y	Number of Aircraft in AS01
	3	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code (link to AS02)
	4	AIC_COL	CHAR	26			N	The most unique grouping of Aircraft model (link to NA01 and XX08)
	5	AIC_MODEL	CHAR	13			Y	The most generic grouping of Aircraft Model (link to AS03 and AS04)
	6	AIC_MAST	CHAR	26			Y	ASAS Master Aircraft
	7	ASAS_CTL	CHAR	29			Y	ASAS Aircraft Control Code
	8	TC_CODE	CHAR	6			Y	Aircraft Type Certificate Code
	9	REG_CODE	CHAR	7			Y	Aircraft Registration Code (link to RG08)
	10	AVN_MODEL	CHAR	12			Y	ASAS AVN MODEL (generally corresponds to the A/C Identification Code)
	11	AVN_MODEL_GP	CHAR	6			Y	ASAS AVN MODEL GROUP (generally corresponds to the AVN ASAS AIRCRAFT TABLES)
	12	POP_NAME	CHAR	20			Y	Aircraft Popular Name
	13	MC_CODE	CHAR	1			Y	Military / Civil Designation
AS02	1	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code (link to AS01)
	2	MFR_NAME	CHAR	55			Y	Aircraft Manufacturer Name
	3	CNT	NUMBER	22			Y	Number of Aircraft with that MFR_CODE in AS01
AS03	1	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code
	2	AIC_MODEL	CHAR	13			Y	The most generic grouping of Aircraft Model (link to AS01)
	3	CNT	NUMBER	22			Y	Number of Aircraft with that AIC_CODE in AS01
AS04	1	AIC_MODEL	CHAR	13			Y	The most generic grouping of A/C Model (link to AS01 and AS06)
	2	VENDOR	CHAR	4			Y	Vendor that provide Data for NIAR
	3	CNT	NUMBER	22			Y	Number of Aircraft
	4	PRIME	CHAR	1			Y	Prime Vendor
	5	SECOND	CHAR	1			Y	Secondary Vendor
	6	NIAR_CNT	NUMBER	22			Y	Number of Aircraft in NAIR data
	7	MFR_CODE	CHAR	6			Y	ASAS Aircraft manfacturer Code
AS05	1	STATE	CHAR	25			Y	State the Aircraft Operator is located
	2	STATE_CODE	CHAR	2			Y	2 letter abbravation for the States and Provinces
	3	COUNTRY_CODE	CHAR	2			Y	Aircraft Operator Country of Origin Code
AS06	1	AIC_MODEL	CHAR	13			Y	The most generic grouping of Aircraft Model (link to AS04)
	2	VEND1	CHAR	4			Y	Vendor that provide Data for NIAR
	3	VEND2	CHAR	4			Y	Vendor that provide Data for NIAR
	4	VEND3	CHAR	4			Y	Vendor that provide Data for NIAR
	5	NORMAL	CHAR	1			Y	
AS07	1	CITY	CHAR	30			Y	Aircraft Operator City Address
	2	STATE_CODE	CHAR	2			Y	2 letter abbrevation for the States and Provinces
	3	FIPS_STATE_CODE	CHAR	2			Y	Two digit US Federal code for STATE (US address only)
	4	COUNTRY_CODE	CHAR	2			Y	Aircraft Operator Country of Origin Code
AS21	1	EIC_CODE	CHAR	20			Y	ASAS Engine identification code (link to XX0

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
								7, NA01)
AS21	2	EIC_MODEL	CHAR	15			Y	ASAS Engine Model Code
	3	EIC_MAST	CHAR	20			Y	ASAS Master Engine Code
	4	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code
	5	AVN_MODEL	CHAR	12			Y	ASAS AVN MODEL (generally corresponds to the A/C Identification Code)
	6	AVN_MODEL_GP	CHAR	6			Y	ASAS AVN MODEL GROUP (generally corresponds to the AVN ASAS A/C TABLE)
	7	TC_HOLD	CHAR	6			Y	Aircraft Type Certificate Hold
	8	TC_CODE	CHAR	6			Y	Aircraft Type Certificate Code
	9	REG_CODE	CHAR	5			Y	FAA's Aircraft Registration Code
	10	DES_CHAR	CHAR	2			Y	
	11	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	12	CNT	NUMBER	22			Y	Number of Aircraft
AS22	1	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code
	2	MFR_NAME	CHAR	55			Y	Aircraft Manufacturer Name
	3	CNT	NUMBER	22			Y	Number of Aircraft
AS23	1	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code
	2	EIC_MODEL	CHAR	13			Y	ASAS Aircraft Engine Model

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
BU01	1	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	2	NIAR_KEY	CHAR	22			Y	NIAR Master Key (made from AIC_MODEL and NI AR_CODE, link to NA01)
	3	NIAR_CODE	CHAR	15			Y	Normalized serial number made by NIAR staff
	4	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
	5	AIC_CODE	CHAR	26			Y	The most unique grouping of Aircraft Model as described by AS01
	6	FL_LINK	CHAR	11			Y	Link Key (link to BU11)
	7	MODEL_CODE	CHAR	10			Y	Aircraft Model Code
	8	MFR_MODEL	CHAR	42			Y	Aircraft Manufacturer Model (link to BU08)
	9	SERIAL	CHAR	15			Y	Aircraft Serial Number (Construction Number)
	10	LINE	CHAR	18			Y	Fuselage Number (production line number assig ned by manufacturer)
	11	REG	CHAR	11			Y	Aircraft Registration Number assigned by Coun try of registry (link to RG01)
	12	REG_EX	CHAR	11			Y	Previous Aircraft Registration
	13	YEAR_MFR_C	CHAR	4			Y	Year the Aircraft was built
	14	ENGINE	CHAR	25			Y	Aircraft Engine Type (link to BU07)
	15	SERIAL_KEY	CHAR	11			Y	Aircraft Serial Key
	16	LUPDATE	DATE	7			Y	Last up date
	17	YEAR_MFR	DATE	7			Y	Year the Aircraft was built
	18	FLIGHT_HRS	CHAR	15			Y	Flying Hours
	19	CYCLES	CHAR	15			Y	Landing Cycles and Takeoff
	20	MTOW	CHAR	6			Y	Max. takeoff weight in kg.(multiply by 2.205 for conversion to pounds)
	21	CONFIG	CHAR	20			Y	Indicates other use then for passenger servic es or exact seat if available
	22	REMARKS	CHAR	80			Y	Remark regarding A/C satus such as leased, so ld, stored or withdrawn
	23	COUNTRY_CODE	CHAR	10			Y	Aircraft Operator Country of Origin Code (li nk to BU02)
	24	CONTINENT	CHAR	1			Y	Continent Code (A=Africa,B=Eastern Block,C=C .America,N=USA,S=S.America)
	25	DELDATE	CHAR	4			Y	Aircraft Original delivery date
	26	SELCAL	CHAR	5			Y	
	27	LSD_BOX	CHAR	1			Y	Leased Box
	28	LSF_BOX	CHAR	1			Y	Leased From Box
	29	LST_BOX	CHAR	1			Y	Leased To Box
	30	LSD_FL	CHAR	20			Y	Leased Text
	31	OO_BOX	CHAR	1			Y	On Order Box
	32	OOPT_BOX	CHAR	1			Y	On Option Box
	33	OP_BOX	CHAR	1			Y	Operator Box
	34	OPB_BOX	CHAR	1			Y	Operated By Box
	35	OPF_BOX	CHAR	1			Y	Operated For Box
	36	OPW_BOX	CHAR	1			Y	Operated With Box
	37	STRD_BOX	CHAR	1			Y	Stored Box
	38	WFU_BOX	CHAR	1			Y	Withdrawn From Use Box
	39	WO_BOX	CHAR	1			Y	Written Off Box
	40	CVTD_BOX	CHAR	1			Y	Converted Box
	41	REG_BOX	CHAR	1			Y	Registration Box
	42	OO_DATE_C	CHAR	4			Y	On Order Date
	43	EXTRA_TEXT	CHAR	40			Y	Extra Text
BU02	1	COUNTRY_CODE	CHAR	10			Y	Aircraft Operator Country of Origin Code (li nk to BU01)
	2	FIPS_CODE	CHAR	2			Y	Two digit US Federal code for Country (link to NA02)

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
BU02	3	COUNTRY	CHAR	30			Y	Aircraft Operator Country of Origin
	4	CONTINENT	CHAR	1			Y	Continent Code (A=Africa,B=Eastern Block,C=C. America,N=USA,S=S.America)
BU03	1	MFR_MODEL	CHAR	42			Y	Aircraft Manufacturer Model
BU07	1	ENGINE	CHAR	25			Y	Aircraft Engine Type (link to BU01)
	2	EIC_CODE	CHAR	20			Y	ASAS Engine identification code (link to AS2 1)
	3	CNT	NUMBER	22			Y	Number of A/C with that type of ENGINE_SERIES in BU01
	4	CNT_LMT	NUMBER	22			Y	Number of Aircraft with that type of ENGINR_S ERIES in BU01 last month
BU08	1	MFR_MODEL	CHAR	42			Y	Aircraft Manufacturer Model (link to BU01)
	2	AIC_CODE	CHAR	26			Y	The most unique grouping of Aircraft model (link to AS01)
	3	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	4	CNT	NUMBER	22			Y	Number of A/C that with type of MODEL_SERIES in BU01
	5	CNT_LMT	NUMBER	22			Y	Number of Aircraft with that type of MFR_MODE L in BU01 last month
BU11	1	OP_CODE	CHAR	30			Y	NIAR Operator Code
	2	IATA_CODE	CHAR	2			Y	Official IATA two letter code for Operator
	3	FL_LINK	CHAR	11			Y	Link Key (link to BU01)
	4	IATA_NUM	CHAR	4			Y	IATA NUMERIC CODE
	5	ICAO_CODE	CHAR	3			Y	Official three letter ICAO code for Operator
	6	ICAO_CALL	CHAR	20			Y	ICAO Call Sign (Radio call name for Companies with ICAO Code)
	7	CO_NAME	CHAR	78			Y	Company Name
	8	ADDR	CHAR	60			Y	Aircraft Operator Current Address
	9	ADDR2	CHAR	60			Y	Aircraft Operator Address line 2
	10	ADDR3	CHAR	40			Y	Aircraft Operator Address Line 3
	11	ADDR4	CHAR	40			Y	Aircraft Operator Address line 4
	12	EMPS	CHAR	5			Y	Empolyees
	13	BASE	CHAR	60			Y	Aircraft Operator Base
	14	PHONE	CHAR	20			Y	Aircraft Owner Telephone Number
	15	TELEX	CHAR	20			Y	Aircraft Operator Telex Number
	16	FAX	CHAR	20			Y	Fax Number
	17	FOUNDED	CHAR	4			Y	Year founded
	18	EXEC	CHAR	60			Y	Head Person
	19	COUNTRY_CODE	CHAR	10			Y	2 digit Code for Country
	20	CONTINENT	CHAR	1			Y	Continent Code (A=Africa,B=Eastern Block,C=C. America,N=USA,S=S.America)
	21	SELECTED	CHAR	1			Y	
BU21	1	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	2	OP_CODE	CHAR	30			Y	NIAR Operator Code
	3	NIAR_KEY	CHAR	22			Y	NIAR Master Key between Data Base (made from AIC_MODEL and NIAR_CODE)
	4	NIAR_CODE	CHAR	15			Y	Normalized serial number made by NIAR staff
	5	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
	6	MODEL	CHAR	8			Y	ASAS Aircraft Model (Aircraft Type) link to BU28
	7	MODEL_SERIES	CHAR	20			Y	Aircraft Model Series (link to BU28)
	8	SERIAL	CHAR	10			Y	Aircraft serial Number (Construction Number

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
								)
BU21	9	STATUS	CHAR	1			Y	Current owner Status Code B=bought,G=owned,S=storage,X=repossessed
	10	REG	CHAR	12			Y	Aircraft Registration Number assigned by Country of registry (link to RG01)
	11	OWNER	CHAR	60			Y	Legal Owner of A/C (may be a Bank or a Company that leases the A/C)
	12	COUNTRY_CODE	CHAR	2			Y	2 Digit US Federal Code for Country
	13	COUNTRY	CHAR	25			Y	Aircraft Operator Country (link to BU22)
	14	COUNTY	CHAR	15			Y	Aircraft Operator County Code for USA address only
	15	ZIP	CHAR	8			Y	Aircraft Operator ZIP_CODE for USA address only
	16	LOCATION	CHAR	60			Y	Aircraft Operator Location
	17	CONTACT	CHAR	25			Y	Aircraft Contact Person
	18	PHONE	CHAR	40			Y	Aircraft Operator Telephone Number
	19	FAX	CHAR	25			Y	Aircraft Operator Fax Number
	20	TELEX	CHAR	17			Y	Aircraft Operator Telex Number
	21	ADDR	CHAR	30			Y	Aircraft Operator Current Address
	22	ADDR2	CHAR	30			Y	Aircraft Operator Address line 2
	23	ADDR3	CHAR	30			Y	Aircraft Operator Address line 3
	24	ADDR4	CHAR	25			Y	Aircraft Operator Address line 4
	25	DELIVERY	CHAR	9			Y	Aircraft Original delivery date (if on order or on option)
	26	MC_CODE	CHAR	2			Y	Military / Civil Designation
	27	WRITEOFF_DATE	CHAR	9			Y	Write Off date
	28	WRITEOFF_PLACE	CHAR	68			Y	Write Off Place
	29	WRITEOFF_REASON	CHAR	47			Y	Write Off Reason
	30	CALL_NO_TAKE	CHAR	1			Y	Contact Code
	31	NOTES1	CHAR	72			Y	Notes 1
	32	NOTES2	CHAR	72			Y	Notes 2
	33	TRASH	CHAR	2			Y	Non-Display Code
	34	GROUPJUST	CHAR	3			Y	Group JNT Code
	35	MODIFIED	CHAR	1			Y	Denotes if the Aircraft hasbeen modified or not (Y = Modified)
	36	NUM	CHAR	5			Y	Vendor count
	37	YEAR_MFR_C	CHAR	4			Y	Year the Aircraft was builtin character
	38	YEAR_MFR	DATE	7			Y	Year the Aircraft was built
	39	LINE	CHAR	10			Y	Fuselage Number (production line number assigned by manufacturer)
BU22	1	COUNTRY	CHAR	25			Y	Aircraft Operator Country of Origin (link to BU21)
	2	FIPS_CODE	CHAR	2			Y	Two digit US Federal code for Country
BU28	1	MODEL	CHAR	8			Y	ASAS Aircraft Model (Aircraft Type) link to BU21
	2	MODEL_SERIES	CHAR	20			Y	Aircraft Model Series (link to BU21)
	3	AIC_CODE	CHAR	26			Y	The most unique grouping of A/C model as described by AS01 (link to AS01)
	4	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned, Destroyed or Salvage)
	5	CNT	NUMBER	22			Y	Number of A/C that with type of MODEL_SERIES in BU21
	6	CNT_LMT	NUMBER	22			Y	Number of Aircraft with that type of MODEL_SERIES in BU21 last month

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
FI01	1	NIAR_KEY	CHAR	22			Y	NIAR Master Key (made from AIC_MODEL and NIAR_CODE) link to NA01
	2	OP_CODE	CHAR	30			Y	NIAR Operator Code
	3	NIAR_CODE	CHAR	15			Y	Normalized serial number made by NIAR staff
	4	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
	5	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	6	AC_CONFIG	CHAR	5			Y	Aircraft configuration (Fixed or Rotary Wing, Lighter than Air etc)
	7	AC_EST_QTY	CHAR	1			Y	Estimated quantity of Aircraft
	8	AC_QTY	NUMBER	22	5		Y	Quantity of Aircraft
	9	AC_MODEL	CHAR	15			Y	Aircraft Model
	10	ACMFR_CODE	NUMBER	22	10	4	Y	Aircraft Manufacture Code (link to FI08)
	11	ACMOD_CODE	NUMBER	22	10	4	Y	Aircraft Model Code (link to FI08)
	12	ACMFR_COUNTRY	CHAR	30			Y	Aircraft Manufacturer Country
	13	ACMFR_REGION	CHAR	21			Y	Aircraft Manufacturer Region
	14	ACMFR_TYPE	CHAR	1			Y	Typt of MFG. Licensee, Consortium, Associate, Prime(if no type) etc
	15	CYCLES	NUMBER	22	9		Y	Landing Cycles
	16	DELIVERY	CHAR	5			Y	Aircraft Original delivery date (if on order or on option)
	17	ENG_CNT	NUMBER	22	2		Y	Number of Engine per Aircraft
	18	ENG_TYPE	CHAR	4			Y	Type of Engine (Turboprop, Turbofan, Turboshaft, Turbojet etc)
	19	ENG_MODEL	CHAR	15			Y	Engine Model
	20	ENGMFR_COUNTRY	CHAR	30			Y	Engine Manufacturer Country
	21	ENGMFR_REGION	CHAR	21			Y	Engine Manufacturer Region
	22	ENGMFR_TYPE	CHAR	1			Y	Engine Manufacturer Type (Prime, Licensee, Co-Production)
	23	ENGMFR_CODE	NUMBER	22	10	4	Y	Aircraft Engine Manufacturer Code (link to FI07)
	24	ENGMOD_CODE	NUMBER	22	10	4	Y	Aircraft Engine Model Code (link to FI07)
	25	EST_AGE	CHAR	1			Y	Estimated Age of Aircraft
	26	FLIGHT_HRS	NUMBER	22	9		Y	Flying Hours
	27	INFLUENCE	CHAR	2			Y	Influence
	28	LUPDATE	DATE	7			Y	Last up date
	29	MC_CODE	CHAR	1			Y	Military / Civil Designation
	30	MISSION	CHAR	5			Y	Transport ,Charter,Packaged Freight,Commuter, Tour,Police Patrol etc
	31	MTOW	NUMBER	22	9		Y	Max. take off weight in pounds
	32	OP_LINK	NUMBER	22	10	4	Y	Manufacturer Operator Code (link to FI11)
	33	OP_COUNTRY	CHAR	30			Y	Aircraft Operator Country of Origin (link to FI02)
	34	OP_REGION	CHAR	21			Y	Aircraft Operator World Region of Origin
	35	OP_TYPE	CHAR	2			Y	Type of operator, Major (Large Carriers), National Carriers etc
	36	OW_LINK	NUMBER	22	10	4	Y	Owner Link (link to FI11)
	37	OW_COUNTRY	CHAR	30			Y	Aircraft Owner Country of Origin (link to FI02)
	38	OW_REGION	CHAR	21			Y	Aircraft Owner World Region of Origin
	39	PHASE	CHAR	2			Y	Active, Storage, Option, order
	40	POP_NAME	CHAR	25			Y	Popular Name
	41	PROPELLER	CHAR	25			Y	PROPELLER
	42	REG	CHAR	15			Y	Aircraft Registration Number assigned by Country of registry
	43	REMARKS	CHAR	100			Y	Remark regarding A/C status such as leased, sold, stored or withdrawn
	44	SEATS	NUMBER	22	4		Y	Aircraft Seat Code

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
FI01	45	SERIAL	CHAR	15			Y	Aircraft Serial Number (Construction Number)
	46	WEIGHT_LBS	NUMBER	22	12	3	Y	Weight in pounds
	47	YEAR_MFR	DATE	7			Y	Year the Aircraft was built
	48	LINE	CHAR	10			Y	Fuselage Number (production line number assigned by manufacturer)
	49	REC	NUMBER	22			Y	Record Number (for each Aircraft)
FI02	1	COUNTRY	CHAR	30			Y	Name of Country (link to FI01)
	2	REGION	CHAR	21			Y	World Region of Country
	3	INFLUENCE	CHAR	2			Y	Influence
	4	FIPS_CODE	CHAR	2			Y	Two digit US Federal code for Country (link to NA02)
FI03	1	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code
	2	AIC_CODE	CHAR	26			N	The most unique grouping of Aircraft Model as described by AS01
	3	AIC_MODEL	CHAR	13			Y	The most generic grouping of Aircraft Model as described by AS01
	4	POP_NAME	CHAR	20			Y	Popular Name
	5	CNT	NUMBER	22			Y	Number of Aircraft with that type of AIC_MODEL in FI01
FI05	1	STATE	CHAR	15			Y	Name of States (link to FI11)
	2	STATE_CODE	CHAR	2			Y	2 letter abbrevation for States and Provinces
FI07	1	ENGMFR_CODE	NUMBER	22	10	4	Y	Aircraft Engine Manufacturer Code (link to FI01)
	2	ENGMOD_CODE	NUMBER	22	10	4	Y	Aircraft Engine Model Code (link to FI01)
	3	MFR_NAME	CHAR	30			Y	Aircraft Manufacturer Name
	4	MODEL	CHAR	15			Y	ASAS Aircraft Model (Aircraft Type)
	5	MODEL_SERIES	CHAR	25			Y	Aircraft Model Series
	6	EIC_CODE	CHAR	20			Y	ASAS Engine identification code (link to AS21)
	7	COST	NUMBER	22	12		Y	Cost of the Aircraft
	8	CNT	NUMBER	22			Y	Number of A/C with that type of ENGINE_SERIES in FI01
	9	CNT_LMT	NUMBER	22			Y	Number of Aircraft with that type of ENGINE_SERIES in FI01 last month
FI08	1	ACMFR_CODE	NUMBER	22	10	4	Y	Aircraft Manufacture Code (link to FI01)
	2	ACMOD_CODE	NUMBER	22	10	4	Y	Aircraft Model Code (link to FI01)
	3	MFR_NAME	CHAR	30			Y	Aircraft Manufacturer Name
	4	MODEL	CHAR	15			Y	ASAS Aircraft Model (Aircraft Type)
	5	MODEL_SERIES	CHAR	25			Y	Aircraft Model Series
	6	AIC_CODE	CHAR	26			Y	The most unique grouping of A/C Model as describedby AS01 (link to AS01)
	7	COST	NUMBER	22	12		Y	Cost of the Aircraft
	8	WEIGHT_LBS	NUMBER	22	13	3	Y	Weight in pounds
	9	SEATS	NUMBER	22	4		Y	Aircraft Seat Code
	10	CNT	NUMBER	22	5		Y	Number of A/C with that type of MODEL_SERIES in FI01
	11	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned, Destroyed or Salvage)
	12	CNT_LMT	NUMBER	22	5		Y	Number of Aircraft with that type of MODEL_SERIES in FI01 last month
FI11	1	OP_CODE	CHAR	30			Y	NIAR Operator Code

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
F111	2	OP_LINK	NUMBER	22	10	4	Y	Manufacturer Operator Code (link to F101)
	3	CO_NAME	CHAR	50			Y	Company Name
	4	ICAO_CODE	CHAR	3			Y	Official three letter ICAO code for Operator
	5	OP_TYPE	CHAR	2			Y	Aircraft Operator type
	6	ABBREV	CHAR	7			Y	Abbreviation
	7	ADDR	CHAR	30			Y	Aircraft Operator Address
	8	ADDR2	CHAR	35			Y	Aircraft Operator Address
	9	POBOX	CHAR	15			Y	Aircraft Operator Post Office Box
	10	CITY	CHAR	30			Y	Aircraft Operator City
	11	STATE	CHAR	15			Y	Aircraft Operator State (link to F105)
	12	ZIP	CHAR	15			Y	Aircraft Operator ZIP_CODE for USA address only
	13	COUNTRY	CHAR	30			Y	Aircraft Operator Country (link to F102)
	14	REGION	CHAR	21			Y	Aircraft Operator World Region of Origin
	15	POSTCODE	CHAR	10			Y	Aircraft Operator Post Office Code
	16	PHONE	CHAR	20			Y	Aircraft Owner Telephone Number
	17	TELEX	CHAR	30			Y	Aircraft Operator Telex Number
	18	FAX	CHAR	30			Y	Fax Number
	19	CONTACT	CHAR	40			Y	Contact Person
	20	IATA_NUM	CHAR	5			Y	IATA NUMERIC CODE
	21	INFLUENCE	CHAR	2			Y	Influence
	22	USR_RSP_DT	CHAR	5			Y	User response date
	23	USED	CHAR	1			Y	Flag for Used
	24	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
IA01	1	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	2	OP_CODE	CHAR	30			Y	NIAR Operator Code
	3	CO_NAME	CHAR	40			Y	Airline (Company) Name
	4	CO_NAME2	CHAR	40			Y	Airline (Company) Name
	5	IATA_NUM	CHAR	4			Y	IATA NUMERIC CODE
	6	IATA_CODE	CHAR	2			Y	Official IATA two letter code for Operator
	7	ICAO_CODE	CHAR	3			Y	Official three letter ICAO code for Operator
	8	IATA_DUP_FLG	CHAR	1			Y	Dupilcate Flag Indicator
	9	ADDR	CHAR	40			Y	Aircraft Operator Address Line 1
	10	ADDR2	CHAR	40			Y	Airline Street Address
	11	CITY	CHAR	20			Y	Aircraft Operator City
	12	STATE	CHAR	17			Y	Aircraft Operator State
	13	COUNTRY_CODE	CHAR	2			Y	2 Digit US Federal Code for Country
	14	COUNTRY	CHAR	20			Y	Airline Country
	15	POST_CODE	CHAR	10			Y	Airline Postal Code
	16	RESV_TELX	CHAR	12			Y	Reservation Department Teletype
	17	RESV_CONTACT	CHAR	20			Y	Reservation Contact Name
	18	RESV_CONTACT_TITLE	CHAR	20			Y	Reservation Contact Title
	19	RESV_CONTACT_TELEX	CHAR	12			Y	Reservation Contact Teletype
	20	EMRG_CONTACT	CHAR	20			Y	Emergency Contact
	21	EMRG_CONTACT_TITLE	CHAR	20			Y	Emergency Contact Title
	22	EMRG_CONTACT_TELEX	CHAR	12			Y	Emergency Contact Telex Number
	23	SITA_FLAG	CHAR	1			Y	Membership Flag SITA
	24	ARINC_FLAG	CHAR	1			Y	Membership Flag ARINC
	25	IATA_FLAG	CHAR	1			Y	Membership Flag IATA
	26	ATA_FLAG	CHAR	1			Y	Membership Flag ATA
	27	OPERATIONS_CODE	CHAR	1			Y	Type of Operations Code
	28	TEMP_ASSGN	CHAR	1			Y	t = Assigned on a Temporary Basis Untill 31 D ecember 1993
	29	EMRG_CONTACT_PHONE	CHAR	20			Y	Emergency Contact Phone Number
	30	EMRG_CONTACT_FAX	CHAR	20			Y	Emergency Contact FAX Number
IA05	1	STATE	CHAR	25			Y	Name of States
	2	STATE_CODE	CHAR	2			Y	2 letter abbrevation for States & Provinces (US,CANADA,BRAZIL,ARGENTINA...)

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
JN01	1	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	2	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
	3	NIAR_CODE	CHAR	15			Y	Normalized serial number made by NIAR staff
	4	NIAR_KEY	CHAR	22			Y	NIAR Master Key (made from AIC_MODEL and NI AR_CODE) link to NA01
	5	OP_CODE	CHAR	30			Y	NIAR Operator Code (link to JN11)
	6	OW_CODE	CHAR	30			Y	NIAR Owner Code (link to JN11)
	7	JET_TURBO	CHAR	1			Y	J = Jets & T = Turbos
	8	MODEL	CHAR	20			Y	ASAS Aircraft Model (Aircraft Type) link to J N08
	9	MODEL_SERIES	CHAR	10			Y	Aircraft Model Series (link to JN08)
	10	SERIAL	CHAR	12			Y	Aircraft Serial Number (Construction Number)
	11	REG	CHAR	12			Y	Aircraft Registration Number assigned by Coun try of registry (link to RG01)
	12	YEAR_MFR_C	CHAR	4			Y	Year the Aircraft was built
	13	LUPDATE	DATE	7			Y	Last up date
	14	OWNER	CHAR	36			Y	Legal Owner of A/C (may be a Bank or a Compa ny that leases the A/C)
	15	OW_ADDR	CHAR	36			Y	Aircraft Owner Address
	16	OW_ADDR2	CHAR	36			Y	Aircraft Owner Address
	17	OW_CITY	CHAR	20			Y	Aircraft Owner City
	18	OW_STATE	CHAR	2			Y	Aircraft Owner State
	19	OW_ZIP	CHAR	10			Y	Aircraft Owner ZIP_CODE for USA address only
	20	OW_COUNTRY	CHAR	20			Y	Aircraft Owner Country (link to JN02)
	21	OW_PHONE	CHAR	16			Y	Aircraft Owner Telephone Number
	22	OW_PHONE2	CHAR	16			Y	Aircraft Owner Telephone Number
	23	OPERATOR	CHAR	36			Y	Operator is a Company or Individual operating the Aircraft
	24	OP_ADDR	CHAR	36			Y	Aircraft Operator Address
	25	OP_ADDR2	CHAR	36			Y	Aircraft Operator Second Address
	26	OP_CITY	CHAR	20			Y	Aircraft Operator City
	27	OP_STATE	CHAR	2			Y	Aircraft Operator State
	28	OP_ZIP	CHAR	10			Y	Aircraft Operator ZIP_CODE
	29	OP_COUNTRY	CHAR	20			Y	Aircraft Operator Country of Origin (link to JN02)
	30	OP_PHONE	CHAR	16			Y	Aircraft Operator Telephone Number
	31	OP_PHONE2	CHAR	16			Y	Aircraft Operator Telephone Number
	32	CHIEF_PILOT	CHAR	30			Y	CHIEF_PILOT
	33	PILOT_PHONE	CHAR	16			Y	PILOT Telephone Number
	34	PILOT_PHONE2	CHAR	16			Y	PILOT Telephone Number
	35	AC_BASE	CHAR	16			Y	Aircraft Base
	36	AC_BASE_STATE	CHAR	4			Y	Aircraft Base State for USA address only
	37	AC_BASE_CODE	CHAR	4			Y	Aircraft Base Code
	38	ACQ_DATE_C	CHAR	6			Y	Acquisition Date in Charcter
	39	LINE	CHAR	10			Y	Fuselage Number (production line number assi gned by manufacturer)
JN02	1	COUNTRY	CHAR	20			N	Name of Country (link to JN01)
	2	FIPS_CODE	CHAR	2			Y	Two digit US Federal code for Country (link to NA02 and JN11)
JN03	1	MFR_CODE	CHAR	6			Y	ASAS Aircraft Manufacturer Code
	2	AIC_CODE	CHAR	26			N	The most unique grouping of Aircraft Model as described by AS01
	3	AIC_MODEL	CHAR	13			Y	The most generic grouping of Aircraft Model a s described by AS01
	4	POP_NAME	CHAR	20			Y	Popular Name
	5	CNT	NUMBER	22			Y	Number of A/C with that type of AIC_CODE in J

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
								N01
JN08	1	MODEL	CHAR	20			Y	ASAS Aircraft Model (Aircraft Type) link to JN01
	2	MODEL_SERIES	CHAR	10			Y	Aircraft Model Series (link to JN01)
	3	AIC_CODE	CHAR	26			Y	The most unique grouping of A/C Model as describedby AS01 (link to AS01)
	4	CNT	NUMBER	22			Y	Number of A/C with that type of MODEL_SERIES in JN01
	5	STATUS	CHAR	1			Y	Current owner Status Code B=bought,G=owned,S=storage,X=repossessed
	6	CNT_LMT	NUMBER	22			Y	Number of Aircraft with that Type of MODEL_SERIES in JN01 last month
JN11	1	OP_CODE	CHAR	30			N	NIAR Operator Code (link to JN01)
	2	CO_NAME	CHAR	36			Y	Company Name
	3	ADDR	CHAR	36			Y	Aircraft Operator Address
	4	ADDR2	CHAR	36			Y	Aircraft Operator Address
	5	CITY	CHAR	20			Y	Aircraft Operator City
	6	STATE	CHAR	2			Y	Aircraft Operator State
	7	ZIP	CHAR	10			Y	Aircraft Operator ZIP_CODE for USA address only
	8	COUNTRY_CODE	CHAR	2			Y	2 Digit US Federal Code for Country (link to JN02)
	9	PHONE	CHAR	16			Y	Aircraft Owner Telephone Number
	10	ICAO_CODE	CHAR	3			Y	Official 3 letter ICAO Code
	11	CNT	NUMBER	22			Y	Number of A/C with that Country Code in JN01
	12	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned, Destroyed or Salvage)

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
LK01	1	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	2	NIAR_KEY	CHAR	22			Y	NIAR Master Key (made from AIC_MODEL and NIA R_CODE) link to NA01
	3	NIAR_CODE	CHAR	15			Y	Normalized serial number made by NIAR staff
	4	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
	5	MODEL_CODE	CHAR	4			Y	Aircraft Model Code
	6	MFR_CODE	CHAR	3			Y	ASAS Aircraft Manufacturer Code
	7	MODEL_SERIES	CHAR	14			Y	Aircraft Model Series (link to LK08)
	8	SERIAL	CHAR	12			Y	Aircraft Serial Number (Construction Number)
	9	LINE	CHAR	6			Y	Fuselage Number (production line number assi gned by manufacturer)
	10	REG	CHAR	10			Y	Aircraft Registration Number assigned by Coun try of registry (link to RG01)
	11	CAT	CHAR	1			Y	Equipment Category C=Cargo;T=Test;S=Survellia nce;E=Executive;P=Passenger;U=Cargo & Passeng er
	12	ENGMFR_CODE	CHAR	3			Y	Aircraft Engine Manufacturer Code (link to L K07)
	13	ENGINE	CHAR	15			Y	Aircraft Engine Type (link to LK07)
	14	C	CHAR	2			Y	Chronological Sequence Code 01=Cancelled;04=d elivered;05=not deliverd;90=destroyed;95=curr ent operator
	15	C2	CHAR	1			Y	Code for existing/non-existing A/C 0=Cancelle d;8=destroyed;1=current;9=retired
	16	YEAR_MFR	DATE	7			Y	Year the Aircraft was built
	17	LUPDATE	DATE	7			Y	Last up date
	18	ACTIVITY	CHAR	11			Y	Activity is any change in the Status of the A /C
	19	OP_IATA_CODE	CHAR	2			Y	Official IATA 2 letter code for Operator
	20	OP_ICAO_CODE	CHAR	3			Y	Official 3 letter ICAO Code for operator
	21	OPERATOR	CHAR	40			Y	Operator is a Company or Individual operating the Aircraft (link to LK11)
	22	OPC	CHAR	1			Y	Operator Category (C=Corop.,G=Gover.,L=Leased ,P=Private,T=Travel,N=Non-Scheduled A/C,S=Sch eduled A/C,X=Overnight package carrier
	23	COUNTRY_CODE	CHAR	3			Y	3 Digit Code for Country (link to LK11 and L K02)
	24	OW_IATA_CODE	CHAR	2			Y	Official IATA 2 letter code for Owner
	25	OW_ICAO_CODE	CHAR	3			Y	Official 3 letter code for the owner
	26	OWNER	CHAR	40			Y	Legal Owner of Aircraft (link to LK11)
	27	OWC	CHAR	1			Y	Owner Category P=Private;T=Travel;G=Gov.;L=Le ased;S=Scheduled
	28	REMARKS	CHAR	34			Y	Remark regarding A/C status such as leased, s old, stored or withdrawn
	29	LUPDATE_C	CHAR	10			Y	Last up date in character
	30	YEAR_MFR_C	CHAR	7			Y	Year the Aircraft was built
	31	CHANGE	CHAR	1			Y	Denotes whether the A/C is new to Operator in Data Reference month
	32	OP_CODE	CHAR	30			Y	NIAR Operator Code
	33	OW_CODE	CHAR	30			Y	NIAR Owner Code
	34	NIAR_MISSION	CHAR	6			Y	NIAR A/C Mission Transport, Patrol, Commuter, Tour, Packaged Freight
	35	NIAR_CONFIG	CHAR	4			Y	Indicates other use then for Passenger or Exa

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
								ct seat if available
LK02	1	COUNTRY_CODE	CHAR	3			Y	3 Digit Code for Country (link to LK01 and LK11)
	2	FIPS_CODE	CHAR	2			Y	Two digit US Federal code for Country (link to NA02)
	3	COUNTRY	CHAR	35			Y	Name of Country
LK03	1	MFR_CODE	CHAR	3			Y	ASAS Aircraft Manufacturer Code
	2	MFR_NAME	CHAR	30			Y	Aircraft Manufacturer Name
	3	ASAS_MFR_CODE	CHAR	6			Y	Manuafcturer Code (ASAS used in LK01)
LK04	1	MODEL_CODE	CHAR	4			Y	Aircraft Model Code
	2	AC_NAME	CHAR	40			Y	Aircraft Model Name
LK05	1	STATE	CHAR	40			Y	Name of State
	2	STATE_CODE	CHAR	2			Y	2 letter abbrevation for States and Provinces
LK07	1	ENGINE	CHAR	15			Y	Aircraft Engine Type (link to LK01)
	2	ENGMFR_CODE	CHAR	3			Y	Aircraft Engine Manufacturer Code (link to LK01)
	3	EIC_CODE	CHAR	20			Y	ASAS Engine identification code (link to AS21)
	4	CNT	NUMBER	22			Y	Number of A/C with that type of Engine in LK01
	5	CNT_LMT	NUMBER	22			Y	Number of A/C with that type of Engine in Lk01 last month
LK08	1	MFR_CODE	CHAR	3			Y	ASAS Aircraft Manufacturer Code
	2	MODEL_SERIES	CHAR	14			Y	Aircraft Model Series (link to LK01)
	3	AIC_CODE	CHAR	26			Y	The most unique grouping of A/C Model as described by AS01 (link to AS01)
	4	STATUS	CHAR	1			Y	Current owner Status Code B=bought,G=owned,S=storage,X=repossessed
	5	CNT	NUMBER	22			Y	Number of A/C with that type of MODEL_SERIES in LK01
	6	CNT_LMT	NUMBER	22			Y	Number of A/C with that type of MODEL_SERIES in LK01 last month
LK11	1	OP_CODE	CHAR	30			Y	NIAR Operator Code
	2	CO_NAME	CHAR	40			Y	Company Name (link to LK01)
	3	ADDR	CHAR	40			Y	Aircraft Operator Address
	4	CITY	CHAR	40			Y	Aircraft Operator City
	5	STATE	CHAR	40			Y	Aircraft Operator State (link to LK05)
	6	COUNTRY	CHAR	40			Y	Aircraft Operator Country
	7	COUNTRY_CODE	CHAR	3			Y	2 Digit US Fedral Code for Country (LINK TO LK02 and LK01)
	8	IATA_CODE	CHAR	2			Y	Official IATA two letter code for Operator
	9	ICAO_CODE	CHAR	3			Y	Official three letter ICAO code for Operator
	10	PHONE	CHAR	20			Y	Aircraft Owner Telephone Number
	11	FAX	CHAR	20			Y	Fax Number
	12	TELEX	CHAR	12			Y	Aircraft Operator Telex Number
LK13	1	OPERATOR	CHAR	40			Y	Operator is a Company or Individual operating the Aircraft
	2	IATA_CODE	CHAR	2			Y	Official IATA two letter code for Operator
	3	ICAO_CODE	CHAR	3			Y	Official three letter ICAO code for Operator
LK14	1	MFR_CODE	CHAR	3			Y	ASAS Aircraft Manufacturer Code

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
LK14	2	MODEL_SERIES	CHAR	14			Y	Aircraft Model Series

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
NA01	1	NIAR_KEY	CHAR	22			Y	NIAR Master Key (made from AIC_MODEL and NIAR_CODE) link to XX01
	2	SERIAL	CHAR	15			Y	Aircraft Serial Number (Construction Number)
	3	LINE	CHAR	6			Y	Fuselage Number (production line number assigned by manufacturer)
	4	REG	CHAR	12			Y	Aircraft Registration Number assigned by Country of registry (link to RG01)
	5	OP_CODE	CHAR	30			Y	NIAR Operator Code (link to NA11)
	6	OW_CODE	CHAR	30			Y	NIAR Owner Code (link to NA11)
	7	AIC_CODE	CHAR	26			Y	The most unique grouping of A/C Model as described by AS01 (link to AS01)
	8	EIC_CODE	CHAR	20			Y	ASAS Engine identification code (link to AS21)
	9	YEAR_MFR	DATE	7			Y	Year the Aircraft was built
	10	LUPDATE	DATE	7			Y	Last up date
	11	LUPDATE_SOURCE	CHAR	2			Y	Last up date source
	12	OPTYP_CODE	CHAR	2			Y	Code for Aircraft Operator Type
	13	ACTYP_CODE	CHAR	2			Y	Code for Aircraft Type
	14	ENGTYP_CODE	CHAR	2			Y	Aircraft Engine TYPE Code
	15	NIAR_SOURCE	CHAR	4			Y	Vendor who provided Data to NIAR
	16	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
	17	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	18	CYCLES	NUMBER	22			Y	Landing Cycles
	19	MTOW	NUMBER	22			Y	Maximum take off weight
	20	FLIGHT_HRS	NUMBER	22			Y	Flying Hours
	21	MISSION	CHAR	6			Y	A/C Mission (Transport,Charter,Commuter,Tour, Police Patrol etc.)
	22	CONFIG	CHAR	4			Y	Aircraft Configuration (Fixed or Rotary Wing, Lighter than Air etc.)
NA02	1	COUNTRY	CHAR	30			N	Name of Country
	2	FIPS_CODE	CHAR	2			Y	Two digit US Federal code for Country (link to Na11)
	3	REGION	CHAR	3			Y	3 Digit Code for World Region of Origin (link to Na04)
	4	CONTINENT	CHAR	1			Y	1 Digit NIAR Code for Continent (link to NA05)
NA03	1	REG_COUNTRY	CHAR	4			N	Registration Country Code
	2	FIPS_CODE	CHAR	2			Y	Two digit US Federal code for Country
NA04	1	REGION_NAME	CHAR	30			Y	Name of Region
	2	REGION	CHAR	3			N	3 digit NIAR Code for Region (link to NA02)
NA05	1	CONTINENT_NAME	CHAR	30			Y	Name of Continent
	2	CONTINENT	CHAR	1			N	One digit NIAR Code for Continent (link to NA02)
NA11	1	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	2	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
	3	NIAR_SOURCE	CHAR	4			Y	Vendor who provided Data to NIAR
	4	OP_CODE	CHAR	30			N	NIAR Operator Code (link to NA01 and to IA01)
	5	OP_CODE_G1	CHAR	30			N	NIAR Operator Group Code

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
NA11	6	IATA_CODE	CHAR	2			Y	Official IATA two letter code for Operator
	7	IATA_DUP_FLG	CHAR	1			Y	Dupilcate IATA_CODE marked by *
	8	IATA_NUM	CHAR	4			Y	IATA NUMERIC CODE
	9	ICAO_CODE	CHAR	3			Y	Official three letter ICAO code for Operator
	10	CO_NAME	CHAR	50			Y	Company Name
	11	ADDR	CHAR	40			Y	Aircraft Operator Current Address
	12	ADDR2	CHAR	40			Y	Aircraft Operator Current Address line 2
	13	ADDR3	CHAR	40			Y	Aircraft Operator current Address line 3
	14	ADDR4	CHAR	40			Y	Aircraft Operator Current Address line 4
	15	CITY	CHAR	30			Y	Aircraft Operator City
	16	STATE_CODE	CHAR	2			Y	Code for the State the Aircraft Operator is l ocated (link to AS05)
	17	POST_CODE	CHAR	15			Y	Aircraft Operator Postal Code
	18	COUNTRY_CODE	CHAR	2			Y	Aircraft Operator Country (link to NA02 and to NA03)
	19	PHONE	CHAR	20			Y	Aircraft Operator Telephone Number
	20	FAX	CHAR	20			Y	Aircraft Operator Fax Number
	21	TELEX	CHAR	30			Y	Aircraft Operator Telex Number
	22	OP_FLG	CHAR	1			Y	Aircraft Operator Flag
	23	OW_FLG	CHAR	1			Y	Aircraft Owner Flag
	24	CNT	NUMBER	22			Y	Number of A/C
	25	PRIV	CHAR	1			Y	
	26	TEMP	CHAR	1			Y	
	27	OW_CNT	NUMBER	22			Y	
	28	FAA_PART	CHAR	3			Y	
	29	FAA_DESIG	CHAR	4			Y	
NA15	1	AIC_CODE	CHAR	26			N	The most unique grouping of Aircraft Model as described by AS01
	2	WEIGHT	NUMBER	22			Y	Maximum take off weight in pounds
	3	SOURCE	CHAR	4			Y	Vendor that provided Data for NIAR
NA16	1	AIC_CODE	CHAR	26			N	The most unique grouping of A/C model as desc ribed by AS01
	2	SEAT_CNT	NUMBER	22			Y	Aircraft Seat Number
	3	SOURCE	CHAR	4			Y	Vendor that provided Data for NIAR

Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
RG01	1	NIAR_KEY	CHAR	30			Y	NIAR Master Key between DB (made from AIC_MODEL & NIAR_CODE) *not in use*
	2	OW_CODE	CHAR	30			Y	NIAR Owner Code (link to RG11)
	3	REG	CHAR	6			N	Aircraft Registration Number assigned by Country of registry (link to XX01)
	4	FAA_CODE	CHAR	7			Y	7 Digit Model Series Code (link to RG08)
	5	MMS_CODE	CHAR	10			Y	FAA Model Make Series Code
	6	YEAR_MFR_C	CHAR	4			Y	Year the Aircraft was built in character
	7	MODEL_NAME	CHAR	35			Y	Aircraft Model Name
	8	SERIAL	CHAR	15			Y	Aircraft Serial Number (Construction Number) assigned by manufacturer
	9	ENG_CODE	CHAR	5			Y	Aircraft Engine Code (link to RG07)
	10	REG_DATE_C	CHAR	8			Y	Aircraft Registration Date in character
	11	OW_TYPE	CHAR	1			Y	Airline Type of Owner (Indvidual, Partner, Co ownership, Gov., Corp.)
	12	OW_NUM	CHAR	2			Y	Airline Number of Owners
	13	OWNER	CHAR	36			Y	Legal Owner of A/C (may be a Bank or a Company that leases the A/C)
	14	ADDR	CHAR	33			Y	Airline Current Address
	15	CITY	CHAR	18			Y	Airline City
	16	STATE	CHAR	2			Y	Airline State
	17	POST_CODE	CHAR	5			Y	Airline Postal Code
	18	COUNTRY_CODE	CHAR	2			Y	3 Digit Code for Country (link to NA02)
	19	COUNTY_CODE	CHAR	3			Y	3 Digit Code for County (for US address only)
	20	NIAR_DATE	DATE	7			Y	Last up date by NIAR staff
	21	LINE	CHAR	22			Y	Fuselage Number (production line number assigned by manufacturer)
	22	NIAR_CODE	CHAR	15			Y	Normalized serial number made by NIAR staff
	23	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
RG07	1	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	2	ENG_CODE	CHAR	5			Y	Aircraft Engine CODE (link to RG01)
	3	MFR_NAME	CHAR	10			Y	Aircraft Engine Manufacturer Name
	4	MODEL_SERIES	CHAR	13			Y	Aircraft Engine Model Series
	5	ENG_HP	CHAR	5			Y	Engine Horse Power (Horsepower for recprocating engines & Pounds of Thrust for Turbine engines)
	6	ENGTYP_CODE	CHAR	1			Y	A/C Engine TYPE Code (1=Recprocating,2=Turbopropeller,3=Turboshaft,4=Turbojet,5=turbine,6=Ram Jet)
	7	FUEL_CON	CHAR	6			Y	Aircraft Fuel Consumption (gallons of fuel consumed per hour)
	8	EIC_CODE	CHAR	20			Y	ASAS Engine identifiction code
	9	CNT	NUMBER	22			Y	Number of Aircraft with that ENGINE_SERIES in RG01
	10	CNT_LMT	NUMBER	22			Y	Number of Aircraft with ENGINE_series in RG01 last month
RG08	1	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active, Null = Optioned , Destroyed or Salvage)
	2	FAA_CODE	CHAR	7			Y	7 Digit Model Series Code (link to RG01 and to AS01)
	3	MFR_NAME	CHAR	30			Y	Aircraft Manufacturer Name

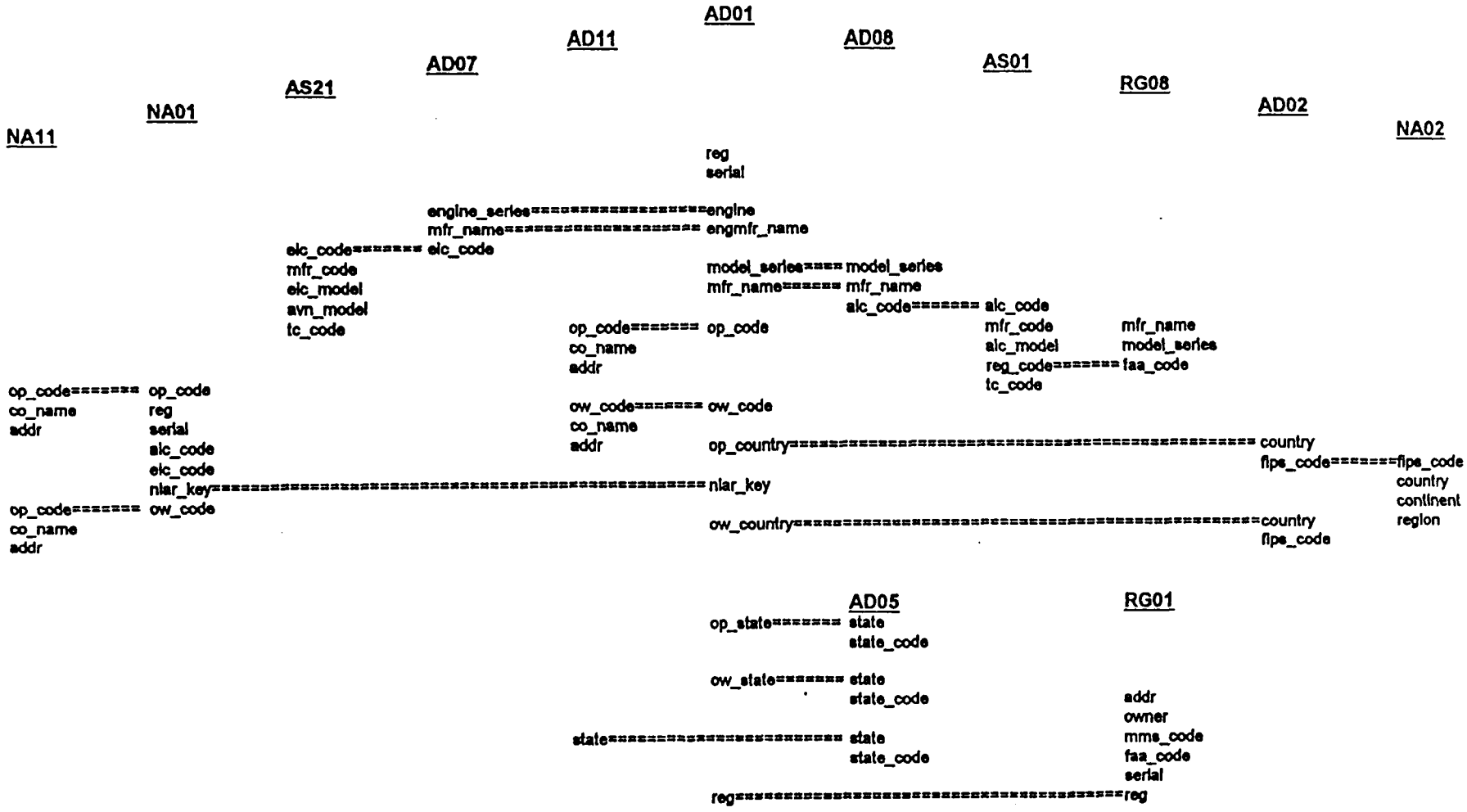
Vendor Data field names and Description

Table Name	Col Seq	Field Name	Data Type	Data Len	Pre Len	Dec	N	Description
RG08	4	MODEL_SERIES	CHAR	20			Y	Aircraft Model Series
	5	ACTYP_CODE	CHAR	1			Y	A/C Type Code (1=Glider,2=Ballon,3=Blimp/Dirigible,4=Fixed Wing Single Engine,5=Fixed Wing Multiengine,6=Rotocraft)
	6	ENGTYP_CODE	CHAR	1			Y	A/C Engine TYPE Code (1=Reciprocating,2=turbo propeller,3=Turboshaft,4=Turbojet,5=Turbine,6=Ram Jet
	7	ENG_CNT	CHAR	2			Y	Number of Engine on the Aircraft
	8	SEAT_CNT	CHAR	3			Y	Maximum number of seats in the Aircraft
	9	MTOW	CHAR	7			Y	Aircraft maximum gross takeoff weight in pounds (class 1 = upto 12499, 2=12500-19999, 3=20 000 & over)
	10	AM_CERT_CODE	CHAR	1			Y	Amateur Certification Code (0 = Not Amatur, 1 = Amateur Certification)
	11	CATAGORY	CHAR	1			Y	Equipment Category (1 = Land, 2 = Sea , 3 = Amphibian)
	12	AC_CRUS_V	CHAR	4			Y	Aircraft's average crusing speed in miles per hour
	13	AIC_CODE	CHAR	26			Y	The most unique grouping of Aircraft Model as described by AS01
	14	CNT	NUMBER	22	5		Y	Number of Aircraft with MODEL_SERIES in RG01
	15	CNT_LMT	NUMBER	22			Y	Number of Aircraft with MODEL_SERIES in RG01 last month
RG11	1	OW_CODE	CHAR	30			N	NIAR Owner Code
	2	CO_NAME	CHAR	50			Y	Company Name
	3	ICAO_CODE	CHAR	3			Y	The most Unique grouping of Aircraft Model as described by AS01
	4	ADDR	CHAR	35			Y	Aircraft Operator Address
	5	CITY	CHAR	30			Y	Aircraft Operator City
	6	STATE	CHAR	2			Y	Aircraft Operator State
	7	POST	CHAR	12			Y	Aircraft Operator Post Office Box
	8	COUNTRY_CODE	CHAR	2			Y	Two digit US Federal Code for Country
	9	CNT	NUMBER	22			Y	Number of Aircraft
	10	NIAR_STATUS	CHAR	1			Y	NIAR A/C Status (A = Active; Null = Optioned, destroyed or salvage)

Appendix D

Niar Table Linkage Information

The following charts show the linkage between many of the major tables that are used to join the normalized data for screens, reports and update programs.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RG08
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elc_code
mfr_code
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model_series
elc_model
mfr_name
mfr_name
avn_model
alc_code
alc_code
tc_code
op_code
mfr_code
mfr_name
alc_model
model_series
co_name
reg_code
faa_code
addr
tc_code
op_code
ow_code
op_code
reg
co_name
serial
addr
op_country
country
alc_code
fips_code
fips_code
elc_code
country
nlar_key
nlar_key
continent
op_code
ow_code
region
ow_country
country
co_name
fips_code
addr
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RG01
op_state
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state
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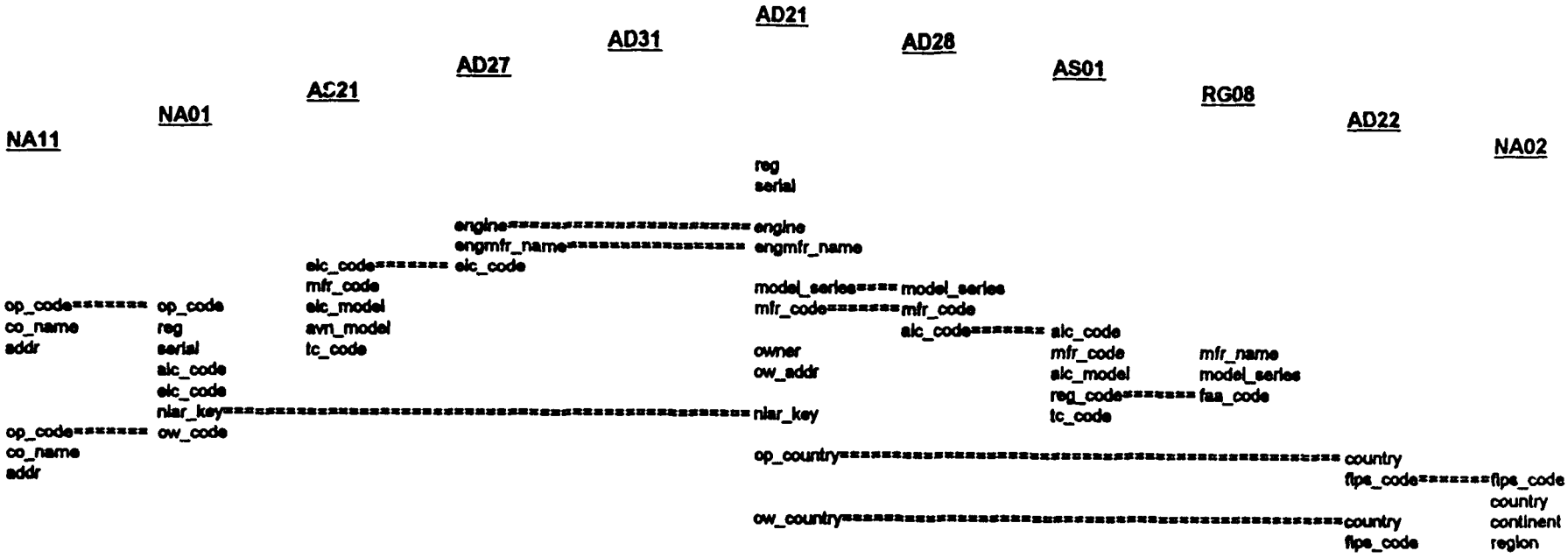
faa_code
serial
reg
reg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engmfr_name
eic_code
eic_code
mfr_code
model_series
model_series
op_code
eic_model
mfr_code
mfr_code
co_name
reg
avn_model
eic_code
eic_code
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mfr_name
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niar_key
tc_code
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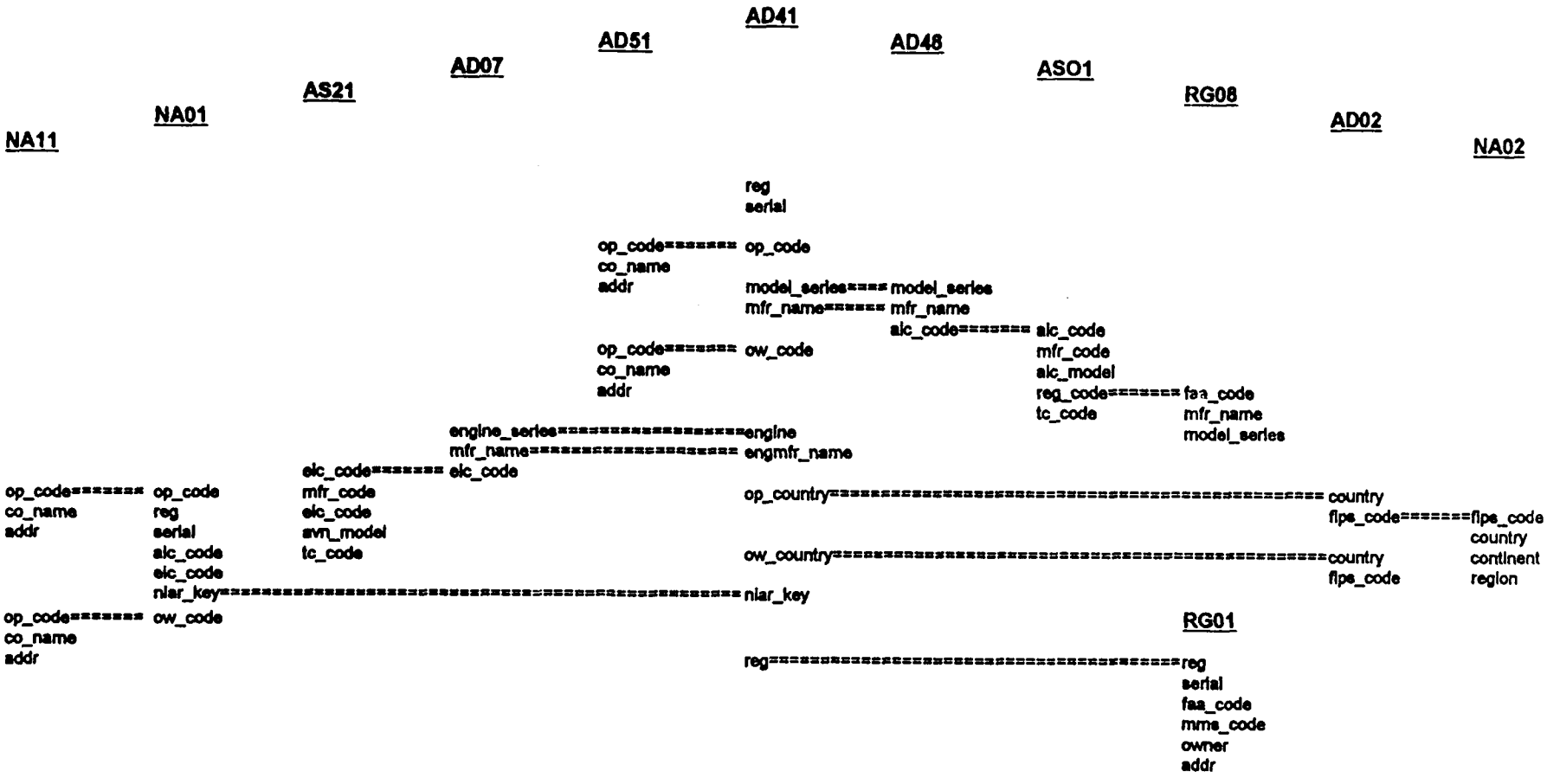
ow_country
country
continent
fips_code
region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AD48
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AS21
RG08
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AD02
NA11
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addr
model_series
mfr_name
alc_code
op_code
co_name
addr
ow_code
mfr_code
alc_model
reg_code
tc_code
faa_code
mfr_name
model_series
engine_series
mfr_name
engine
engmfr_name
alc_code
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serial
alc_code
elc_code
nlar_key
mfr_code
elc_code
avn_model
tc_code
op_country
ow_country
country
fips_code
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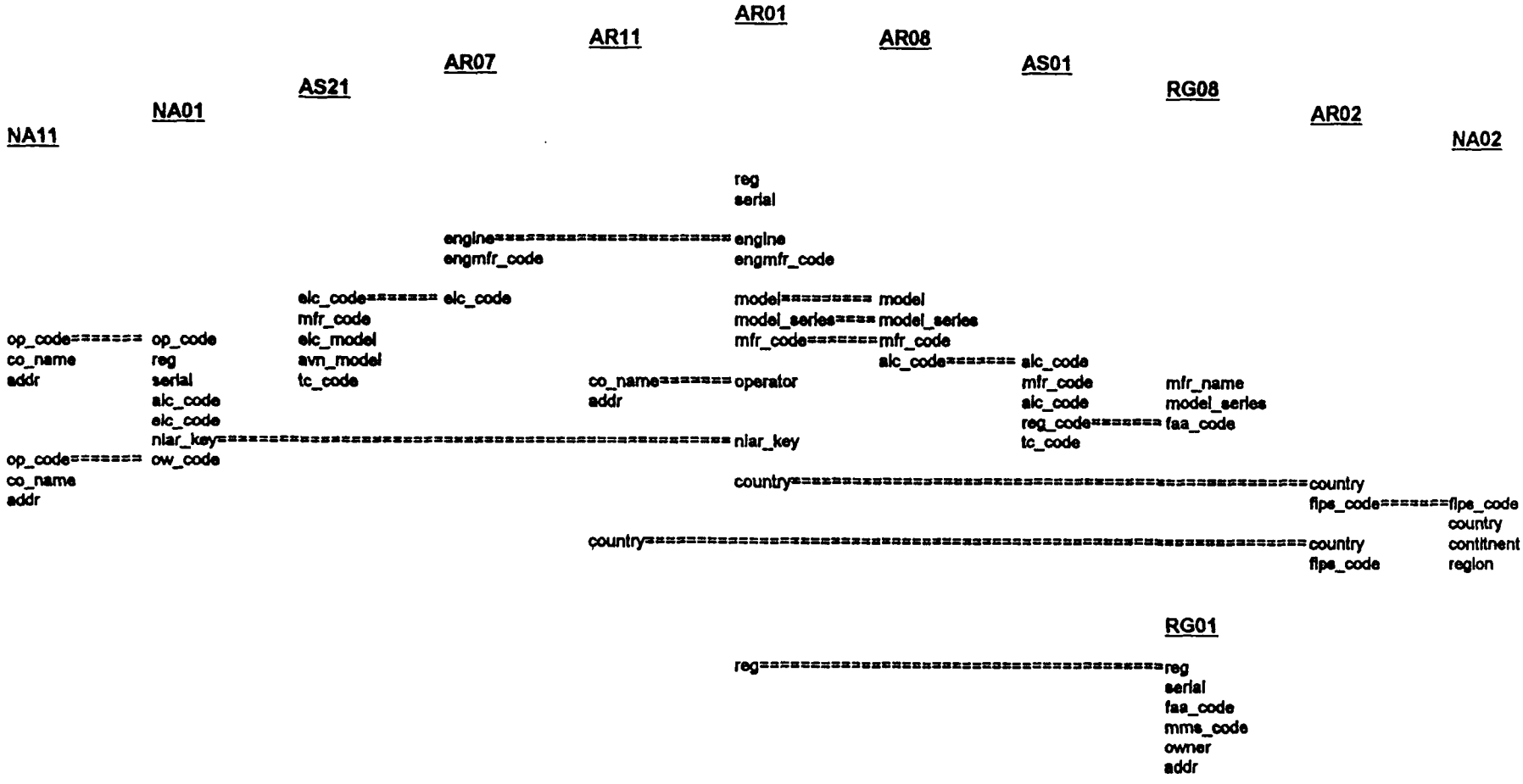
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AR02
NA11
NA02
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mfr_code
elc_model
avn_model
tc_code
model
model_series
mfr_code
alc_code
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addr
niar_key
op_code
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fips_code
continent
region
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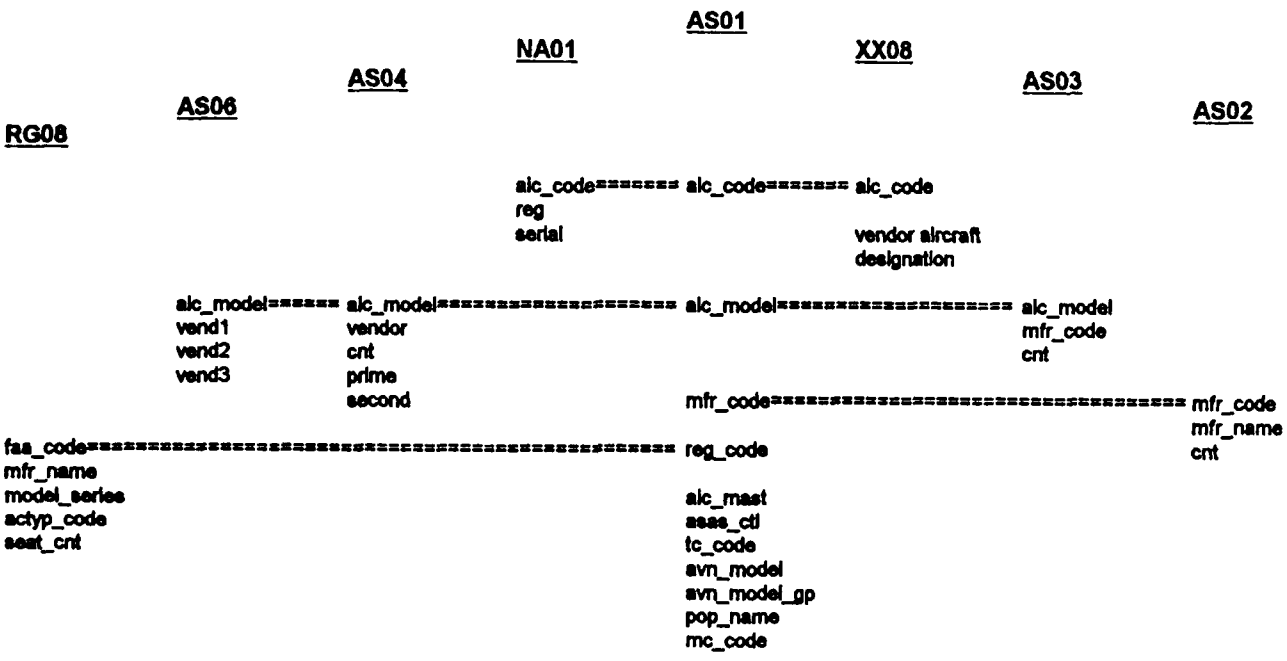
owner
faa_code
mms_code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XX08
AS04
AS03
AS06
AS02
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aic_code
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aic_model
vend1
vend2
vend3
aic_model
vendor
cnt
prime
second
aic_model
aic_model
mfr_code
cnt
mfr_code
mfr_name
cnt
faa_code
mfr_name
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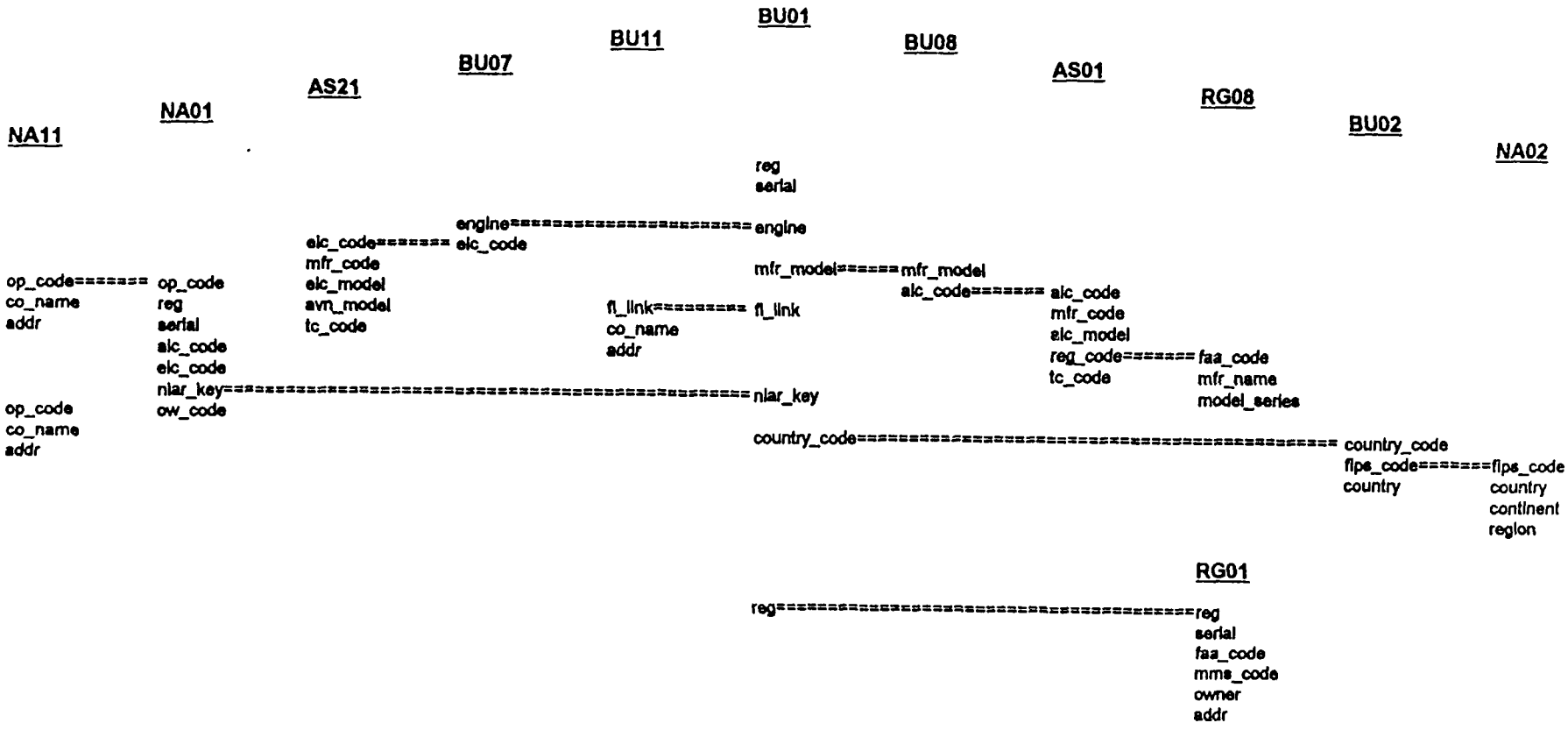
pop_name
mc_code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BU07
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BU02
NA11
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elc_code
mfr_code
elc_model
avn_model
tc_code
mfr_model
mfr_model
alc_code
alc_code
mfr_code
elc_model
reg_code
faa_code
tc_code
mfr_name
model_series
fl_link
fl_link
co_name
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op_code
op_code
co_name
addr
op_code
reg
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alc_code
elc_code
nlar_key
ow_code
nlar_key
country_code
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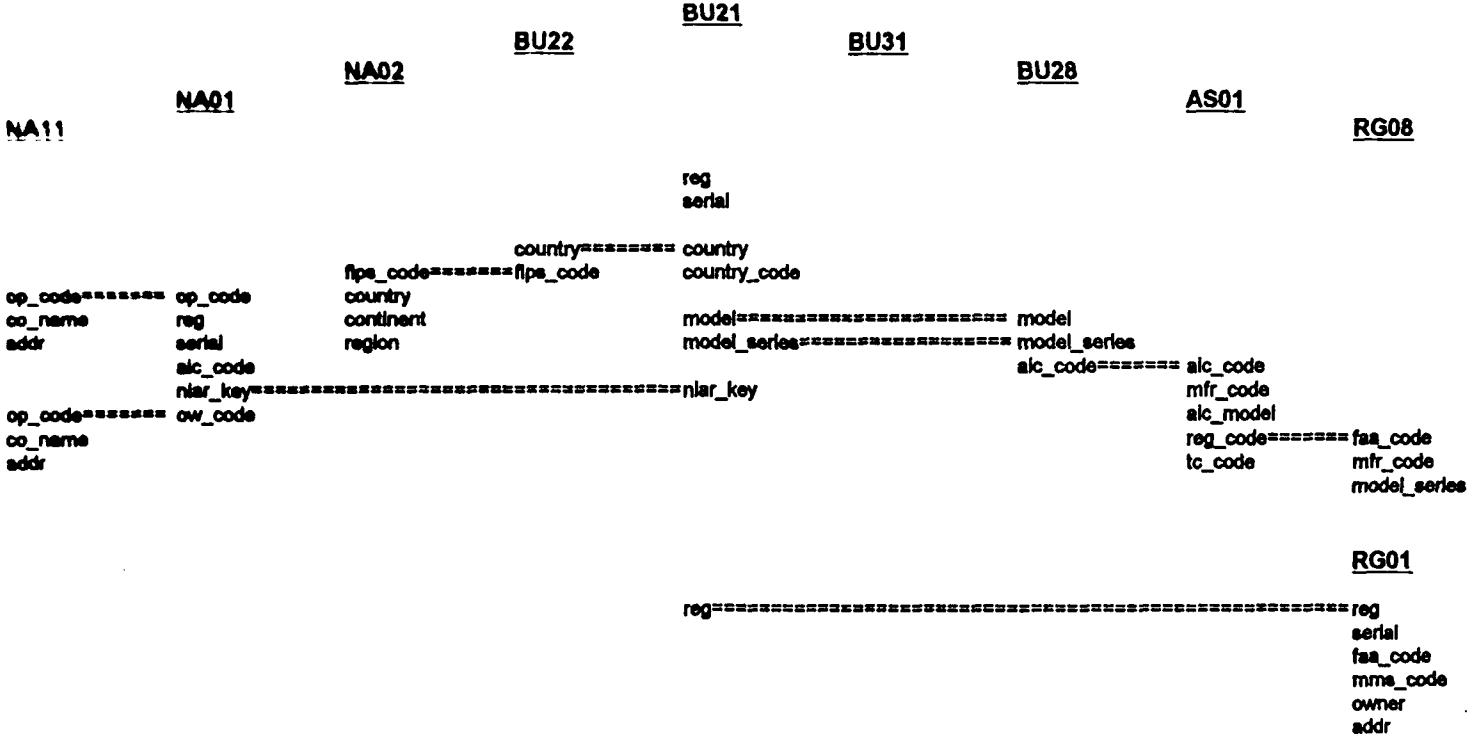
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country
model
model
co_name
reg
continent
model_series
model_series
addr
serial
region
alc_code
alc_code
niar_key
niar_key
mfr_code
op_code
ow_code
alc_model
co_name
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owner
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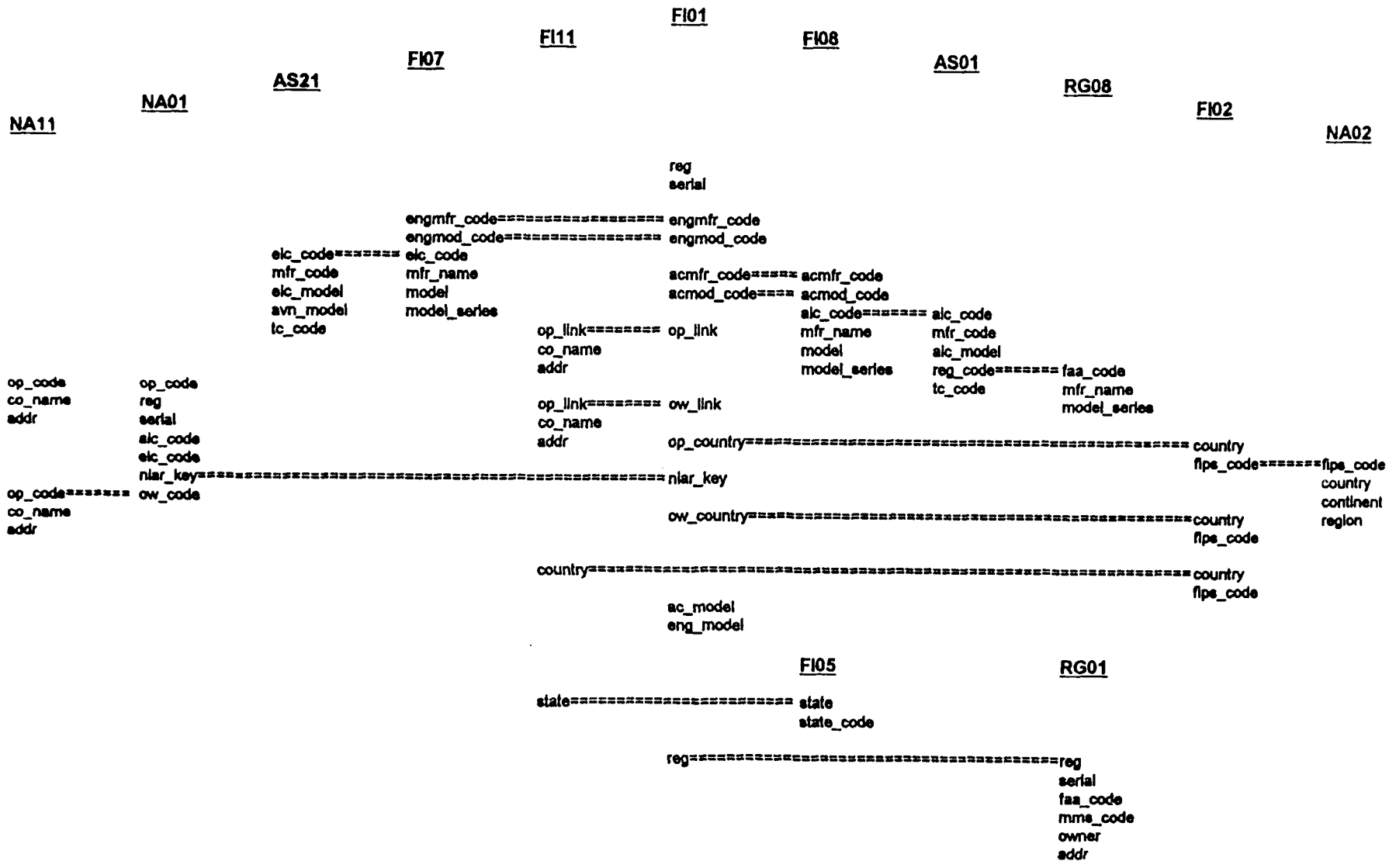
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elc_code
mfr_code
elc_model
avn_model
tc_code
acmfr_code
acmod_code
op_link
co_name
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mfr_name
model
model_series
alc_code
alc_model
reg_code
faa_code
ow_link
op_country
country
flps_code
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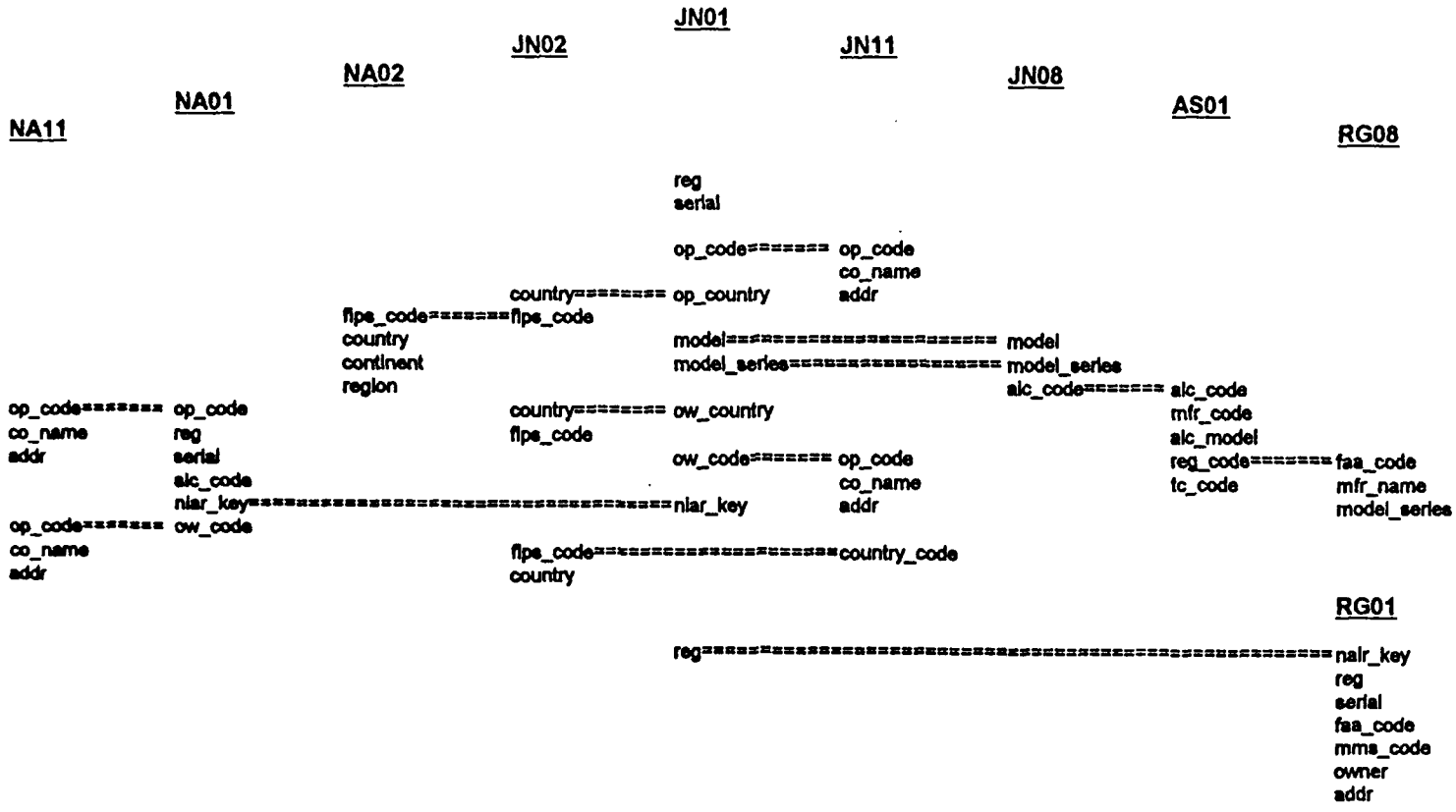
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mfr_code
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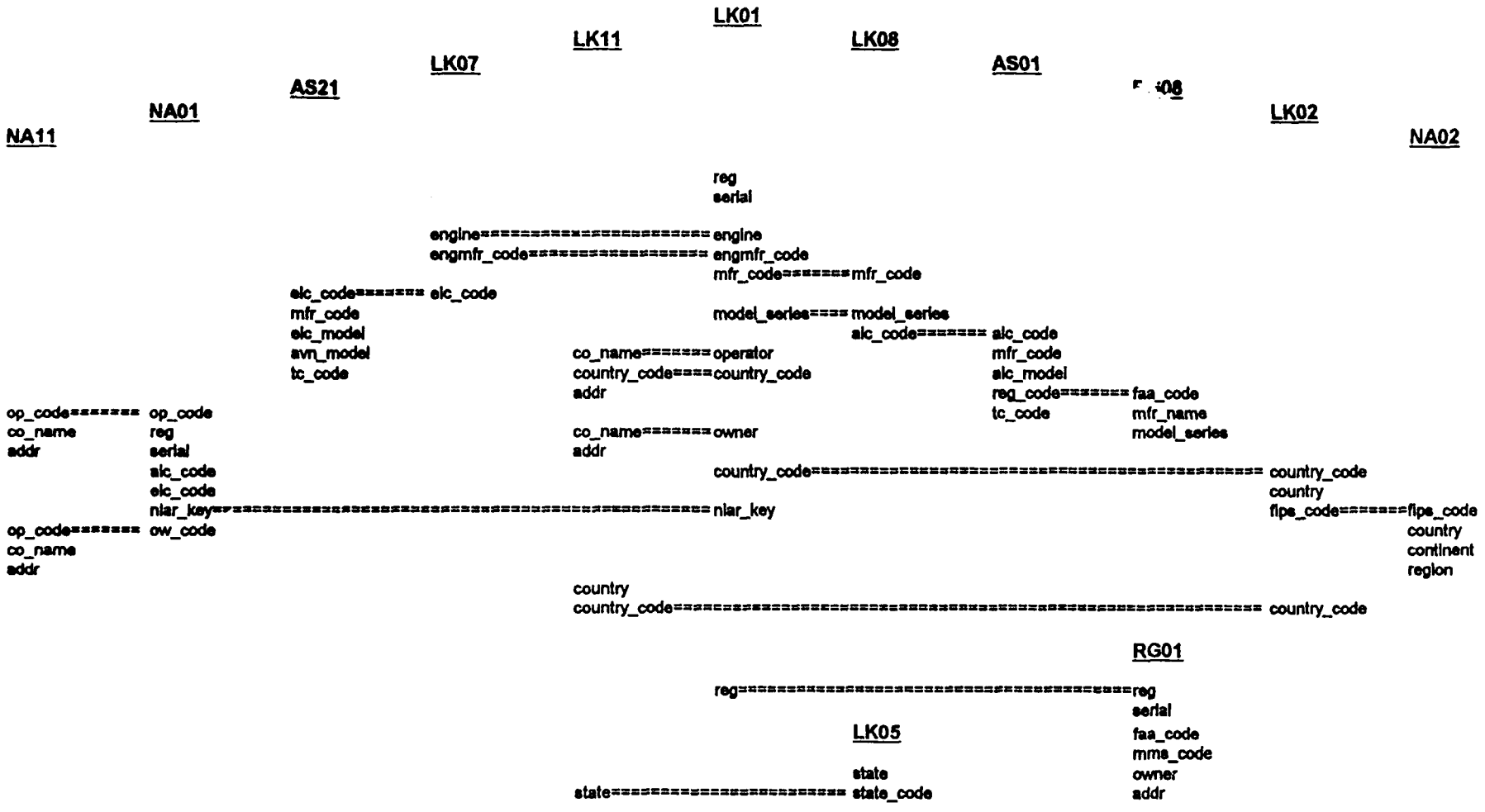
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op_code
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serial
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country
elc_code
fips_code
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op_code
ow_code
co_name
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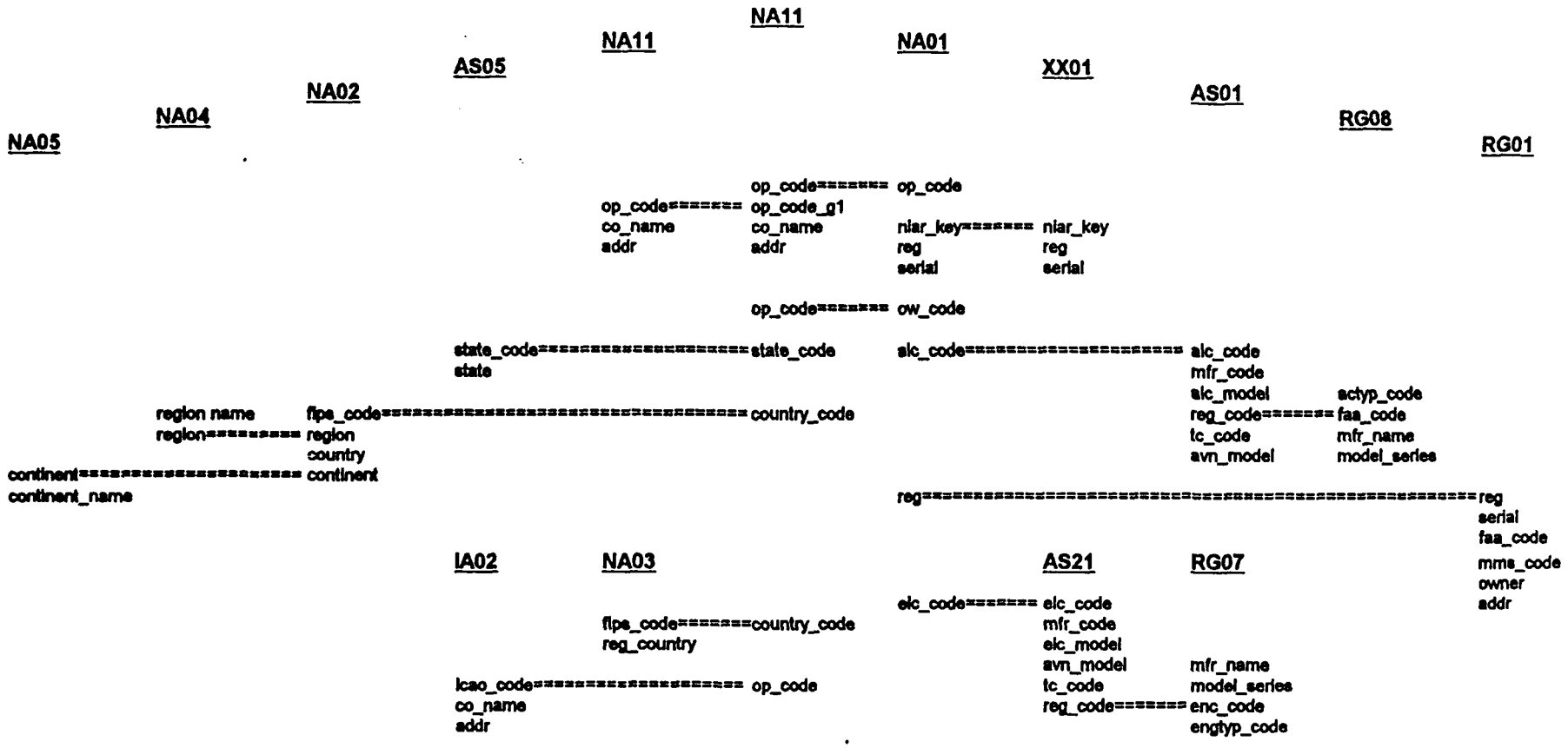
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XX01
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AS01
NA04
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NA05
RG01
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addr addr
niar_key======= niar_key
reg reg
serial serial
op_code======= ow_code
state_code==========state_code
state
alc_code==========alc_code
mfr_code
alc_model actyp_code
region name flps_code==========country_code reg_code======= faa_code
region========= region tc_code mfr_name
country avn_model model_series
continent========== continent
continent_name
reg==========reg
serial
faa_code
IA02 NA03 AS21 RG07 mms_code
owner
addr
elc_code======= elc_code
flps_code=======country_code mfr_code
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avn_model mfr_name
tc_code model_series
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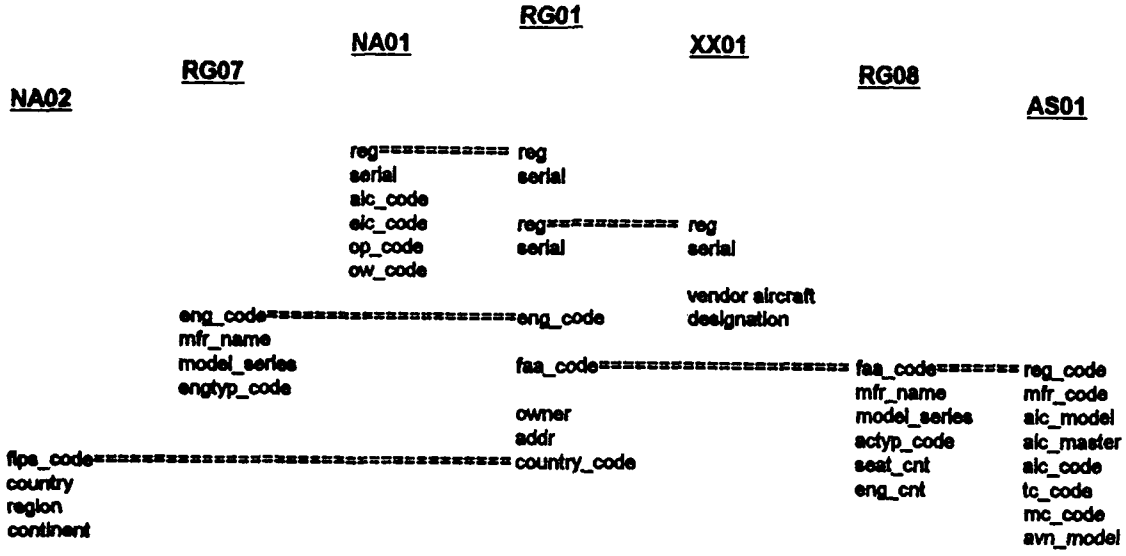
co_name engtyp_code
addr


RG01
NA01
XX01
RG07
RG08
NA02
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reg
serial
aic_code
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reg
serial
vendor aircraft
designation
eng_code
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model_series
actyp_code
seat_cnt
eng_cnt
reg_code
mfr_code
aic_model
aic_master
aic_code
tc_code
mc_code
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country_code
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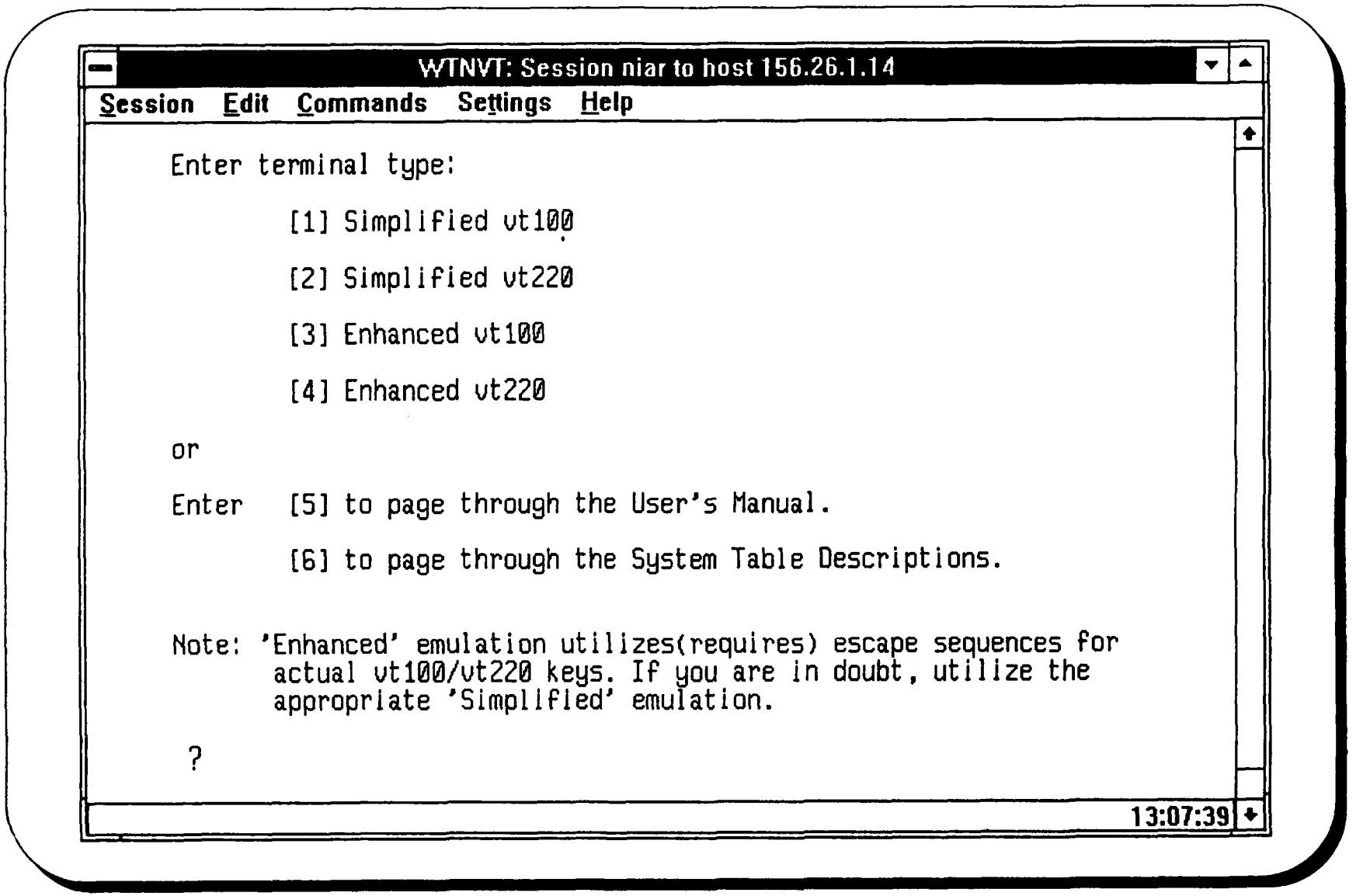
Appendix E

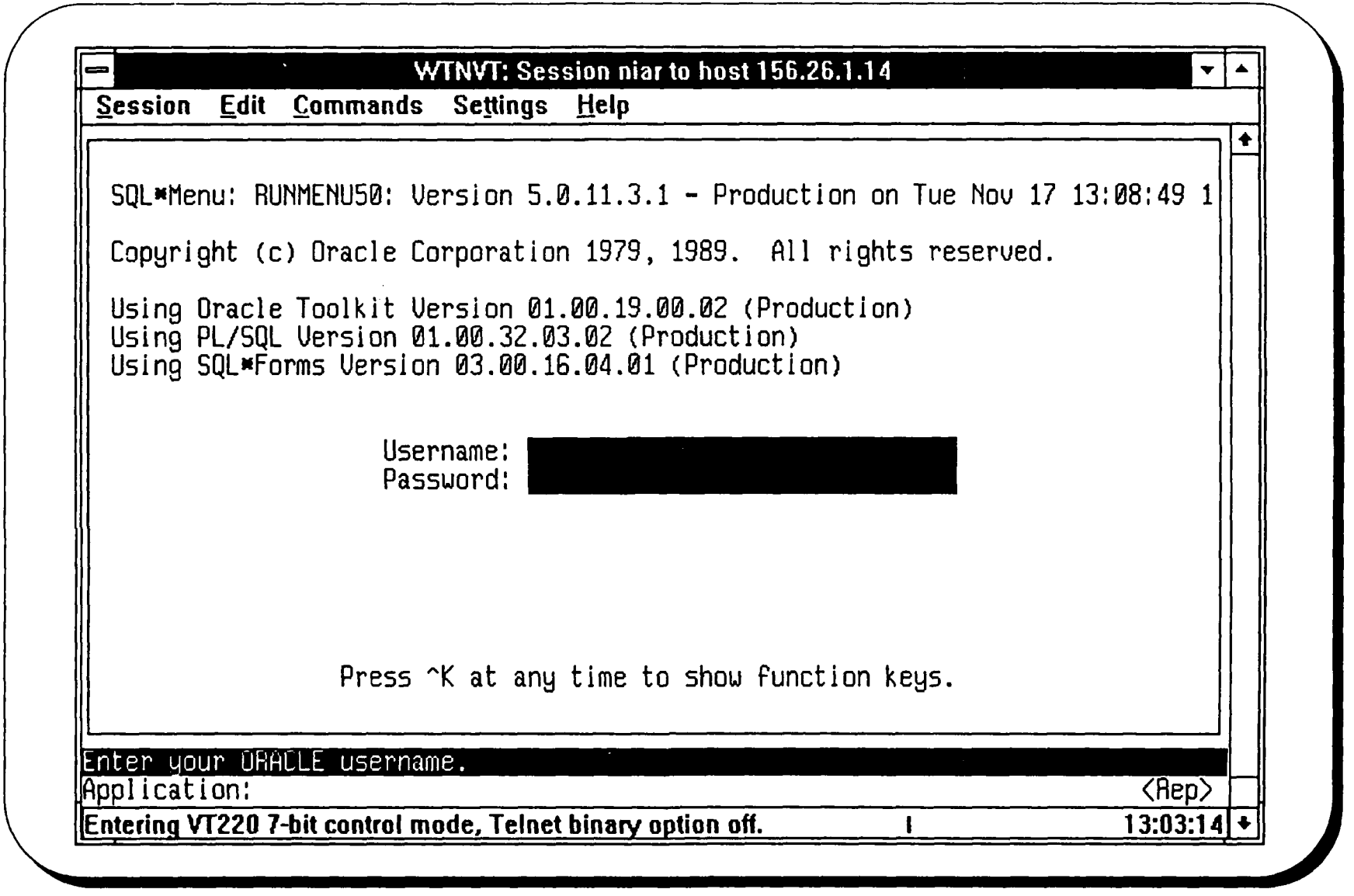
Major Screens For IAOIS Aircraft Information

The following screen images are used to show the variety and depth of data available to the FAA analysts and managers.

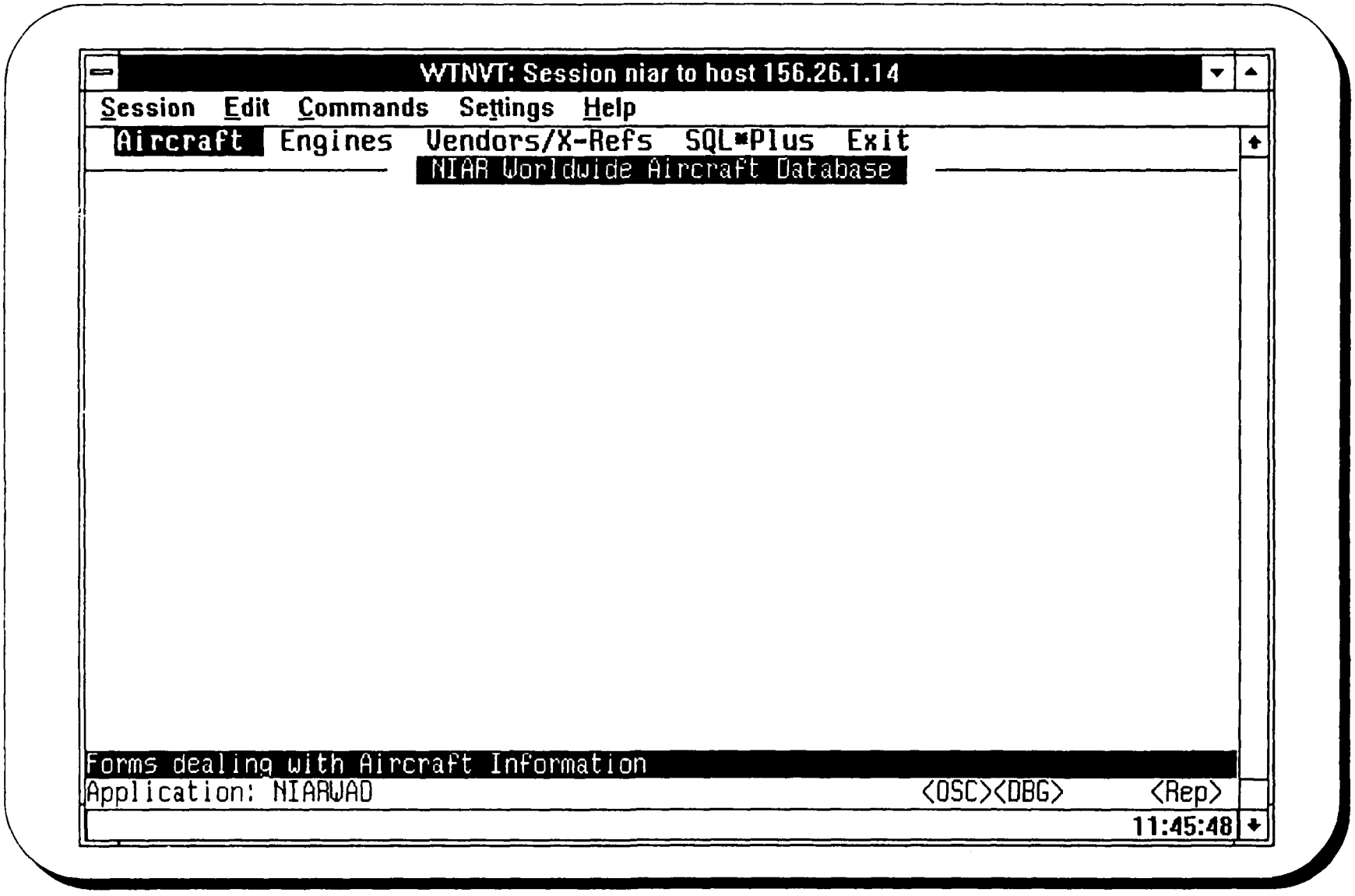
Initial Screens



Opening Screen

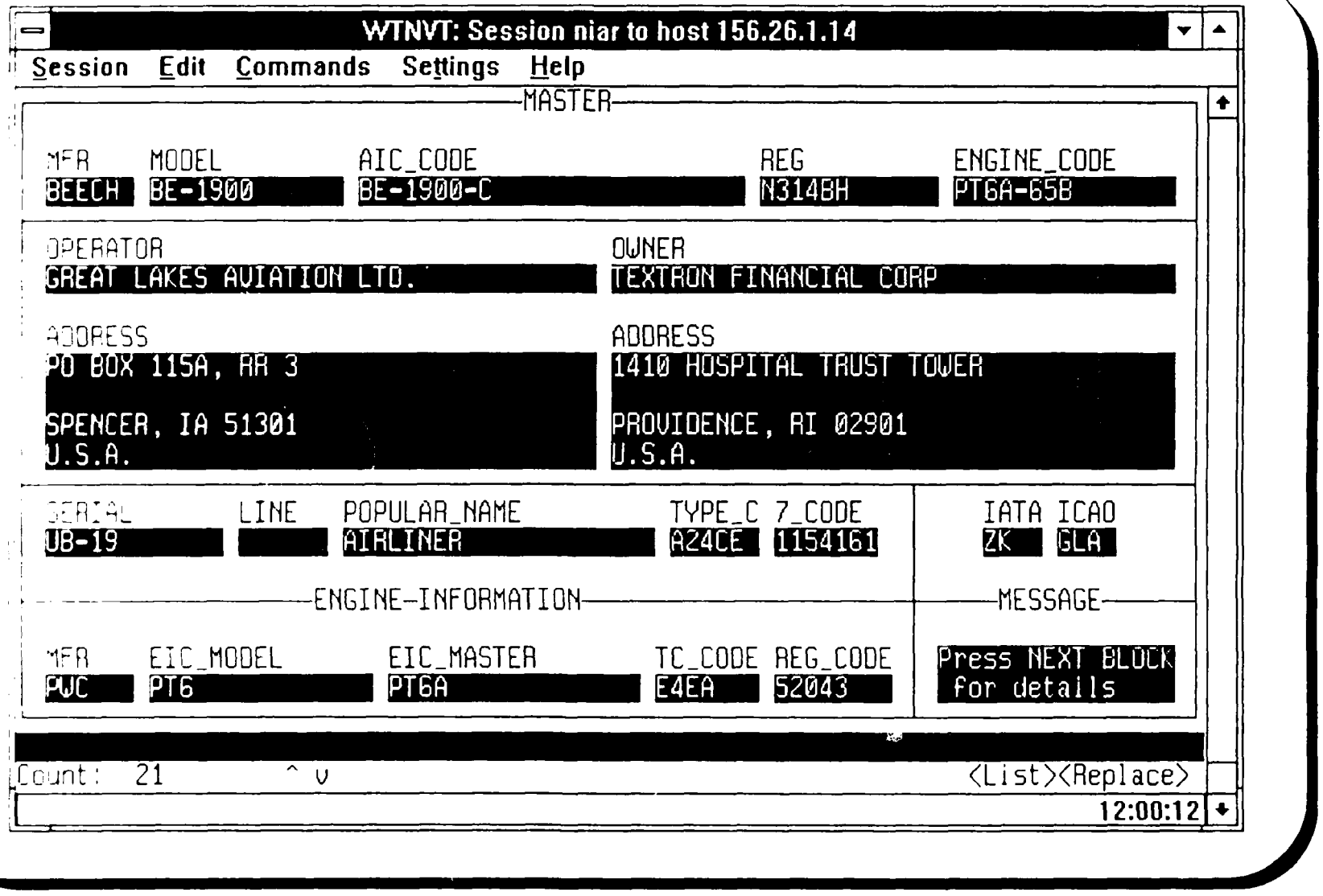


Logon Screen

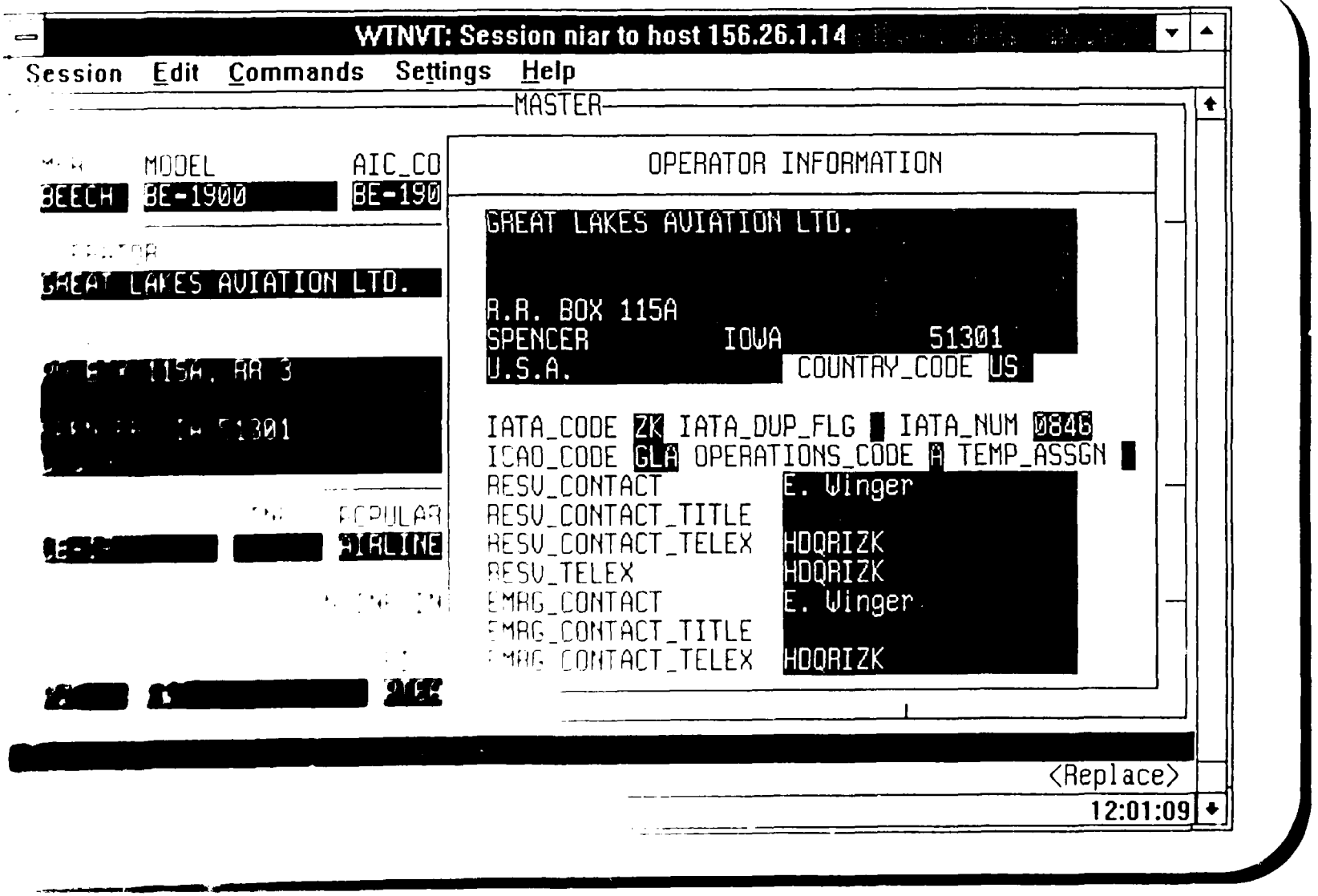


Forms Selection Menu

Aircraft Master Files

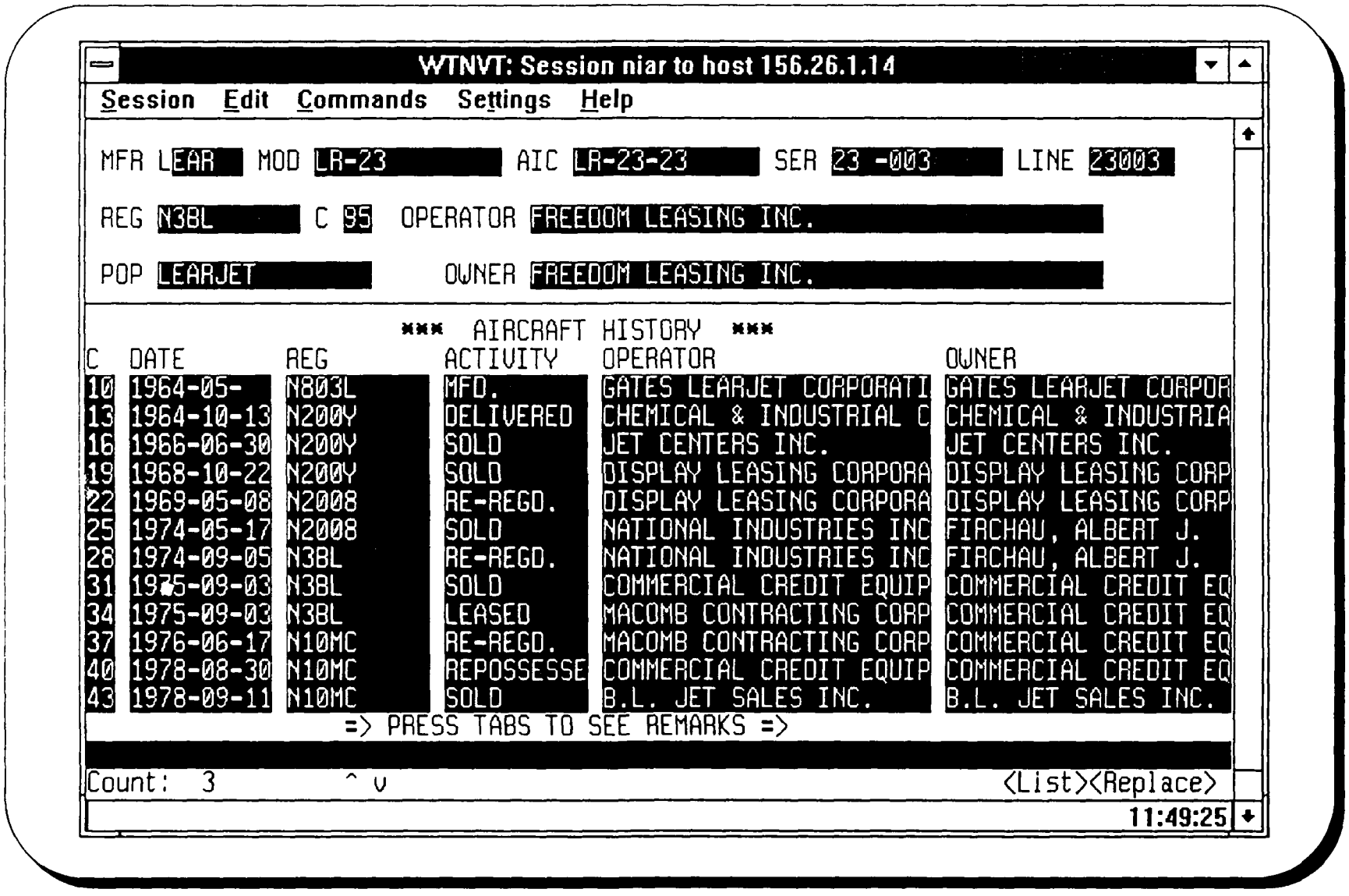


Aircraft Master

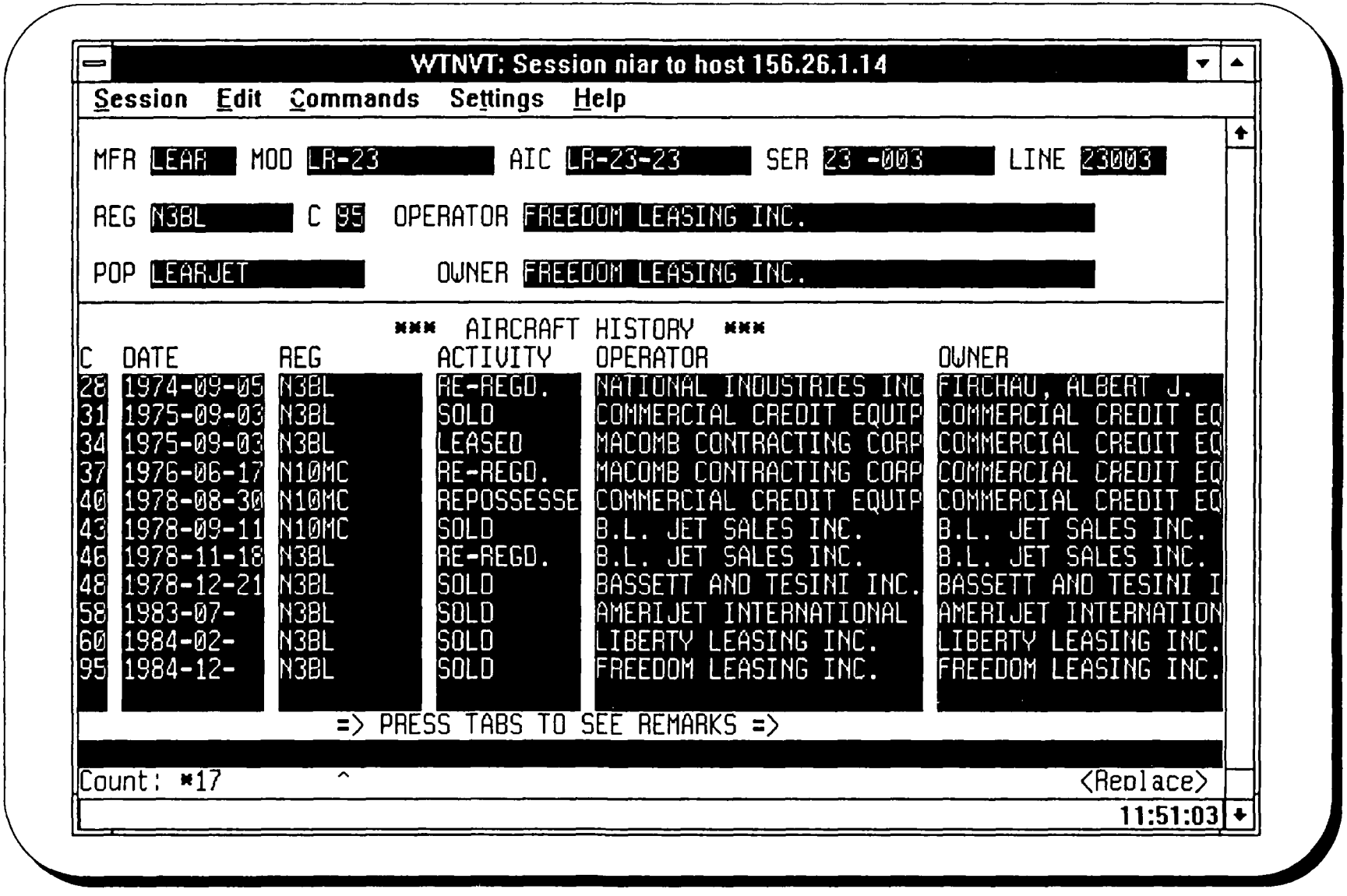


Master Overlay

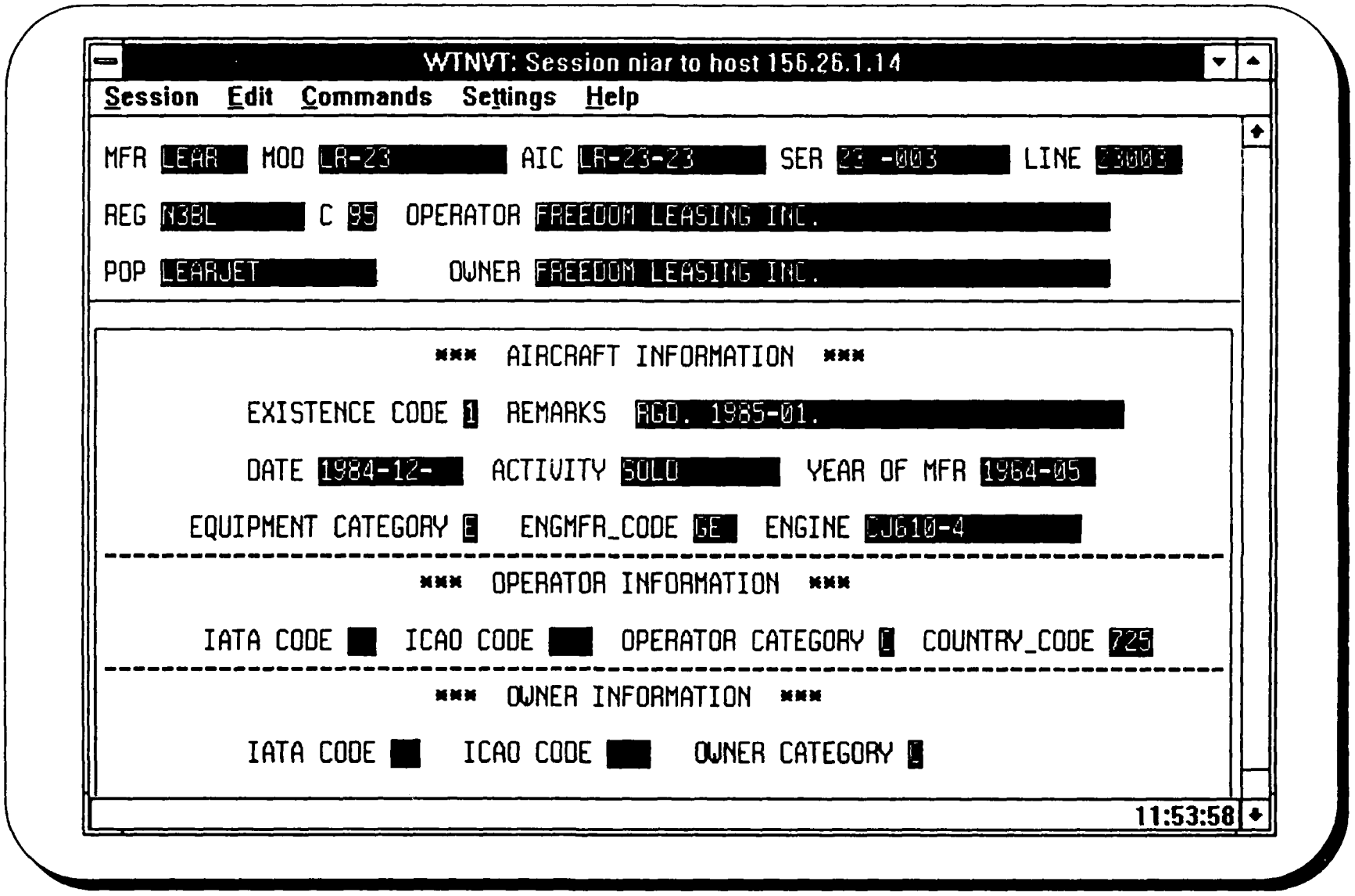
Aircraft History Screens



Aircraft History Screen

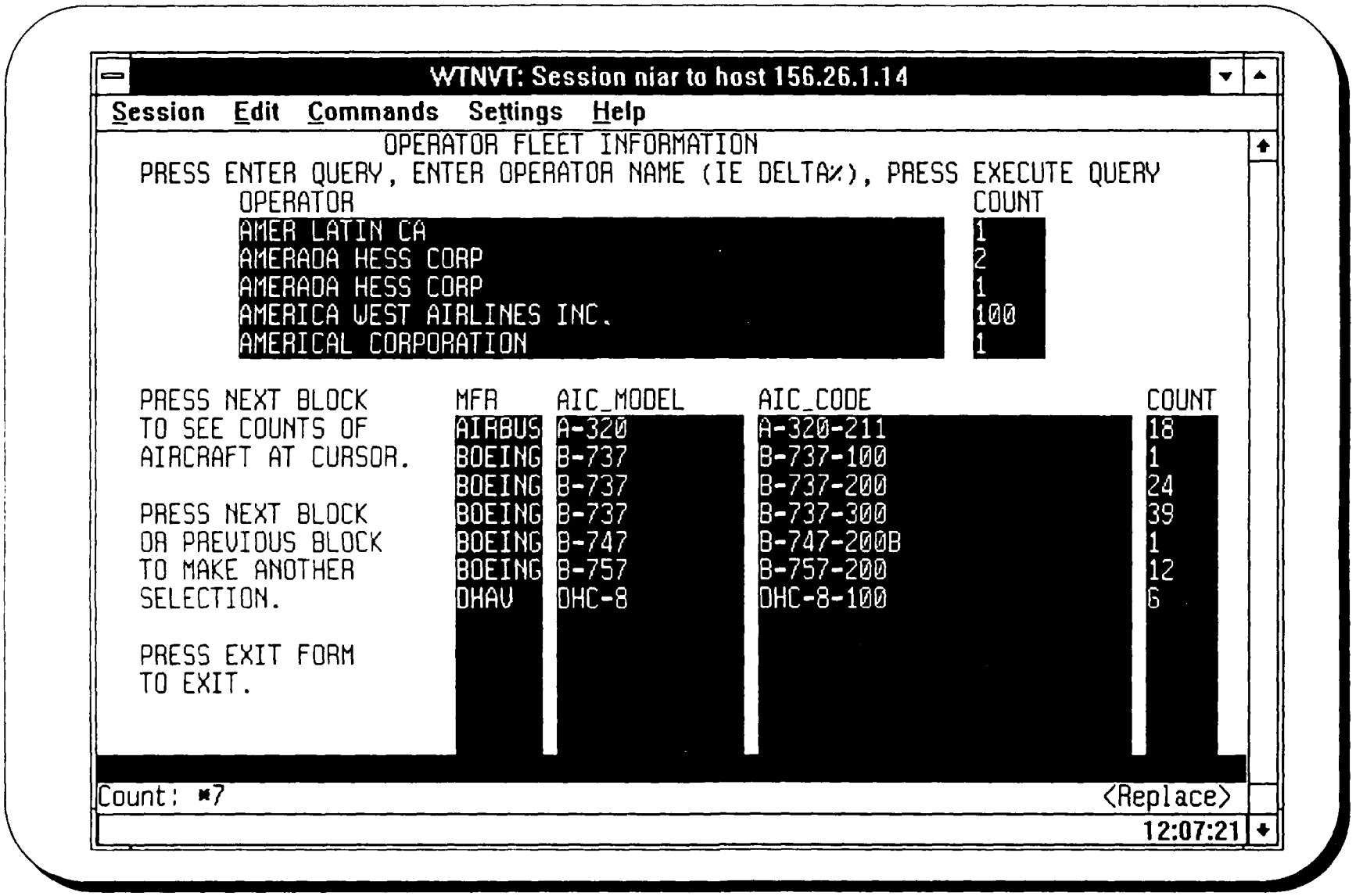


Aircraft History Screen

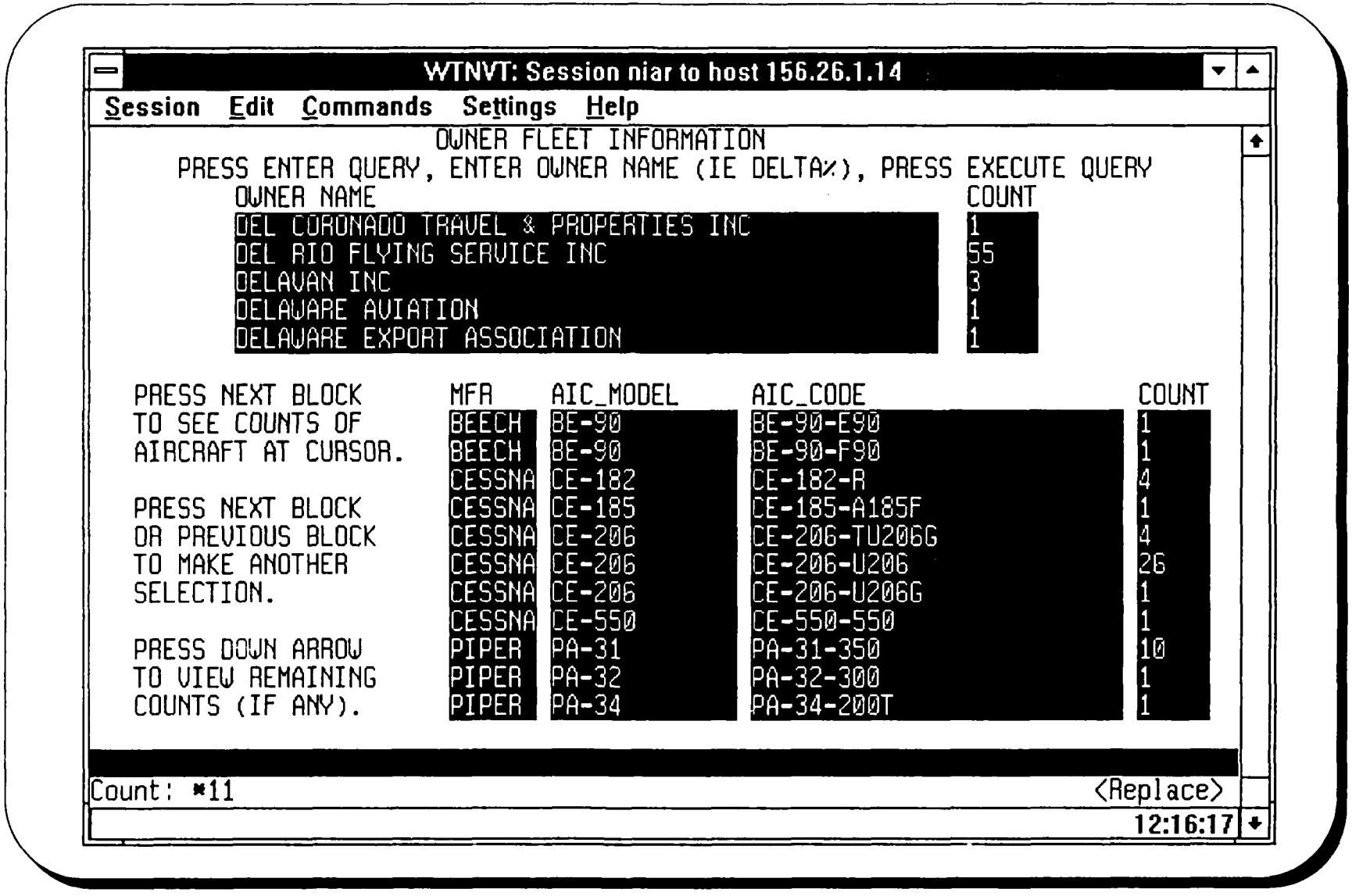


Additional Information Overlay

Fleet Information

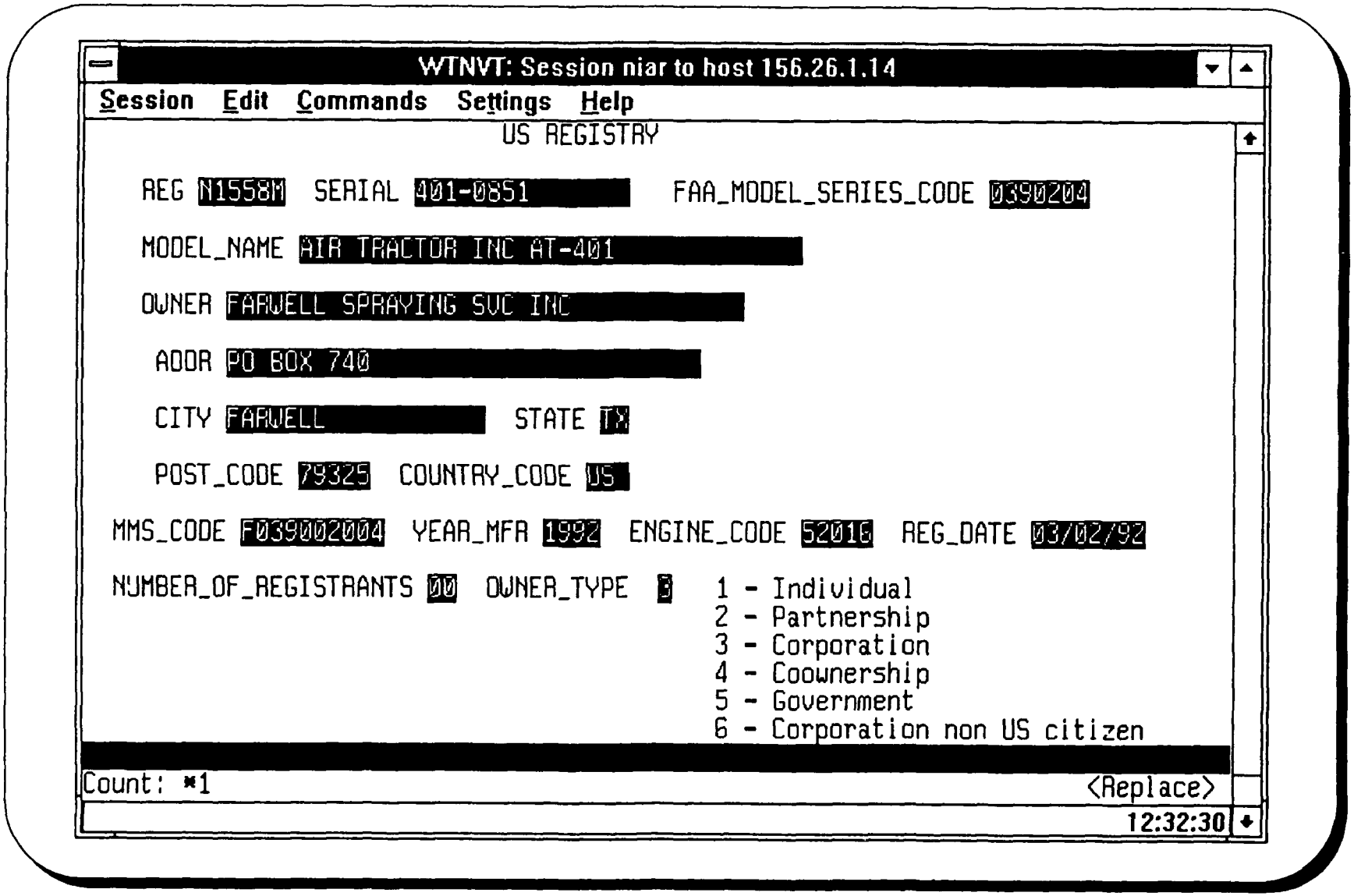


Aircraft Operator Fleet

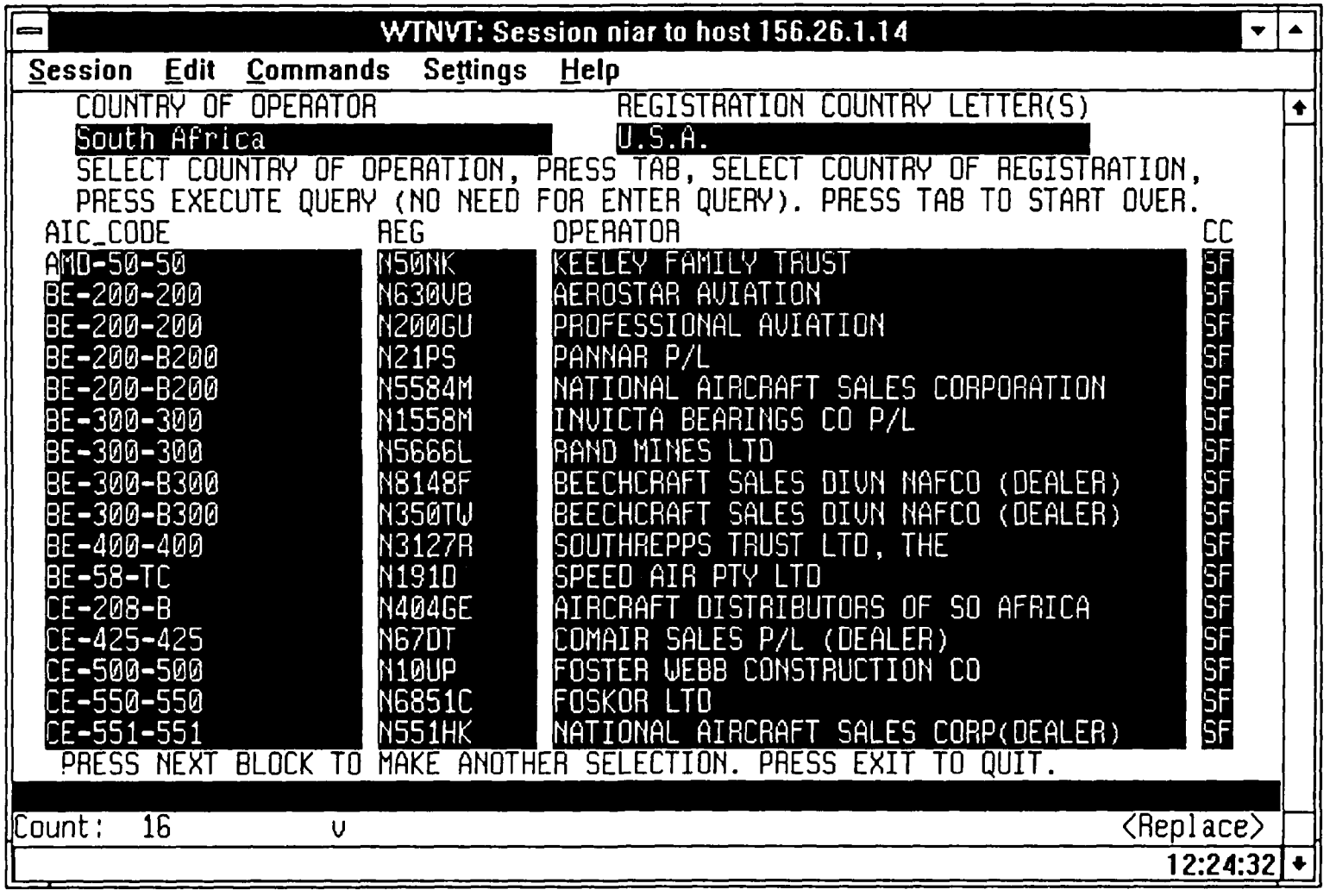


Aircraft Owner Fleet

Registry Information

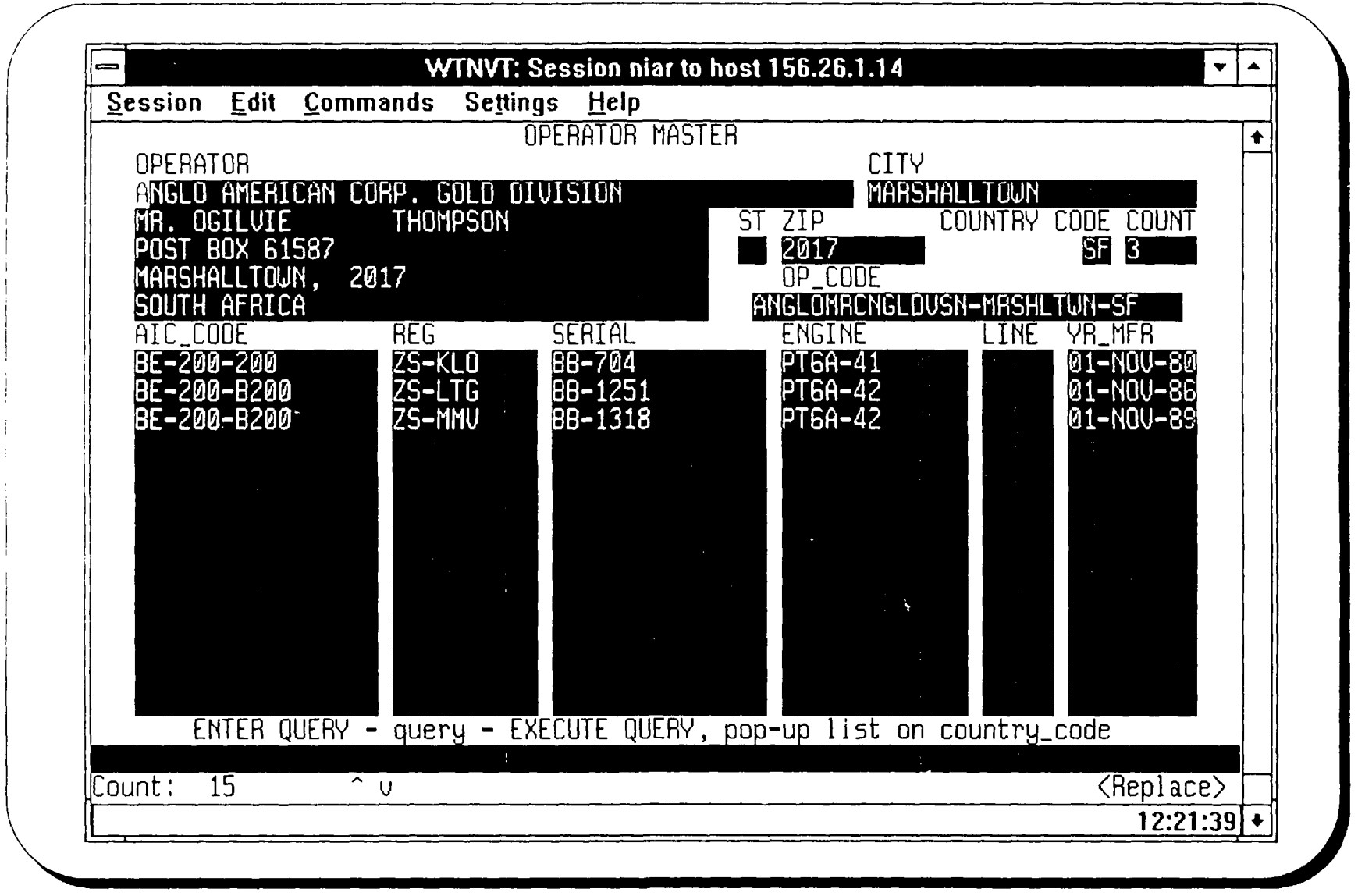


FAA Registry Information

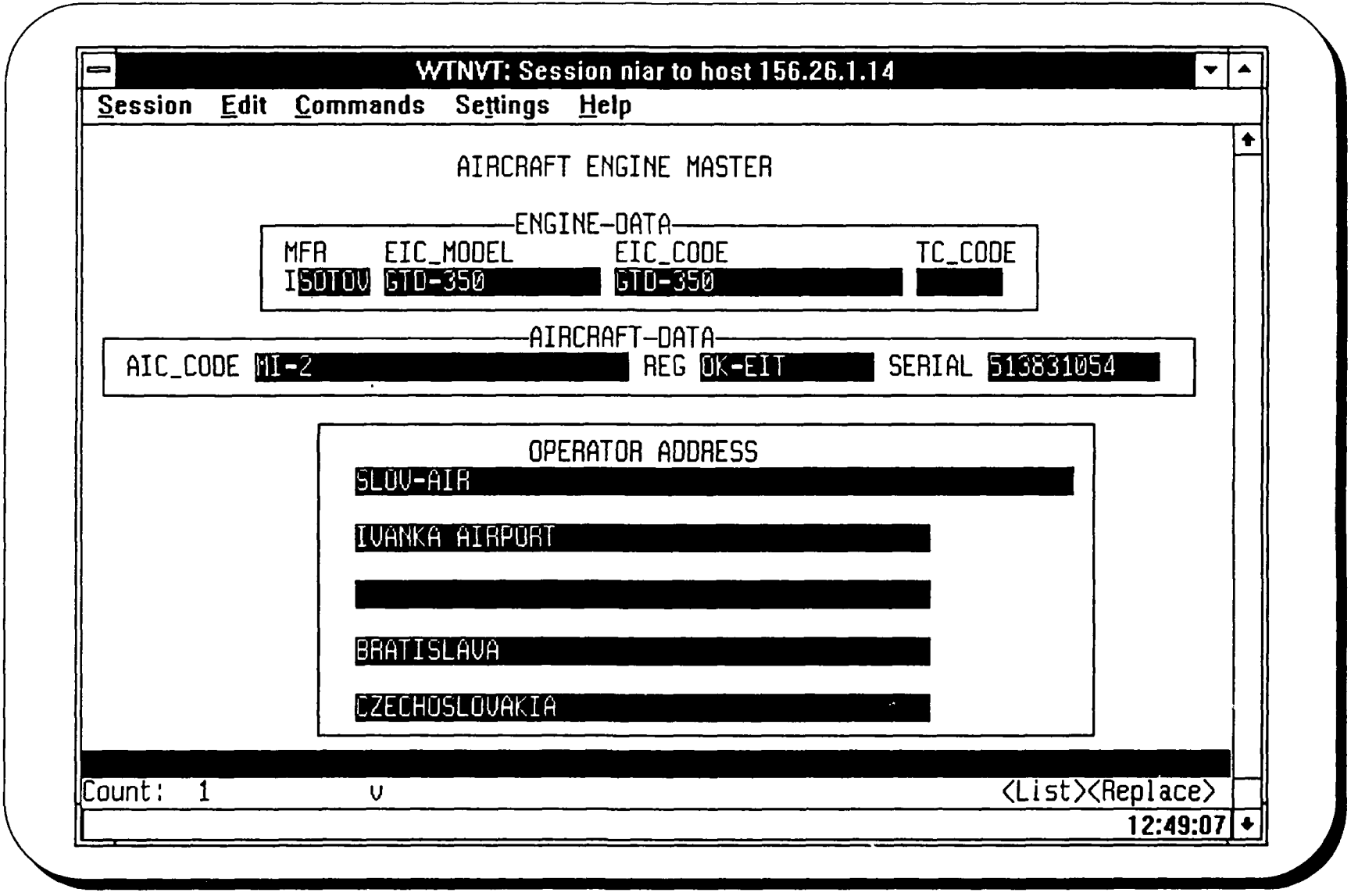


Country of Registration vs Country of Operator

Other Master Forms

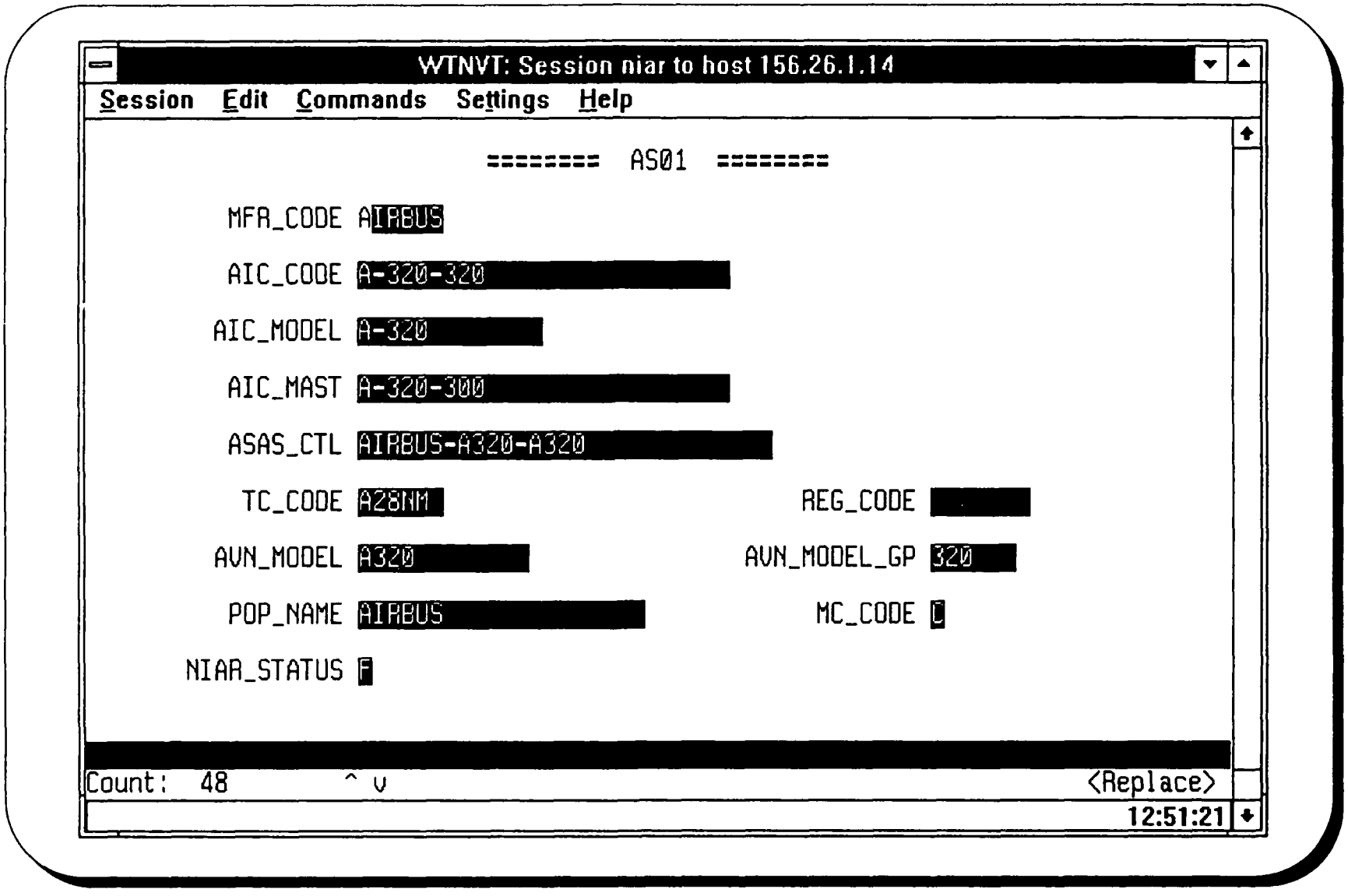


Operator Master Form

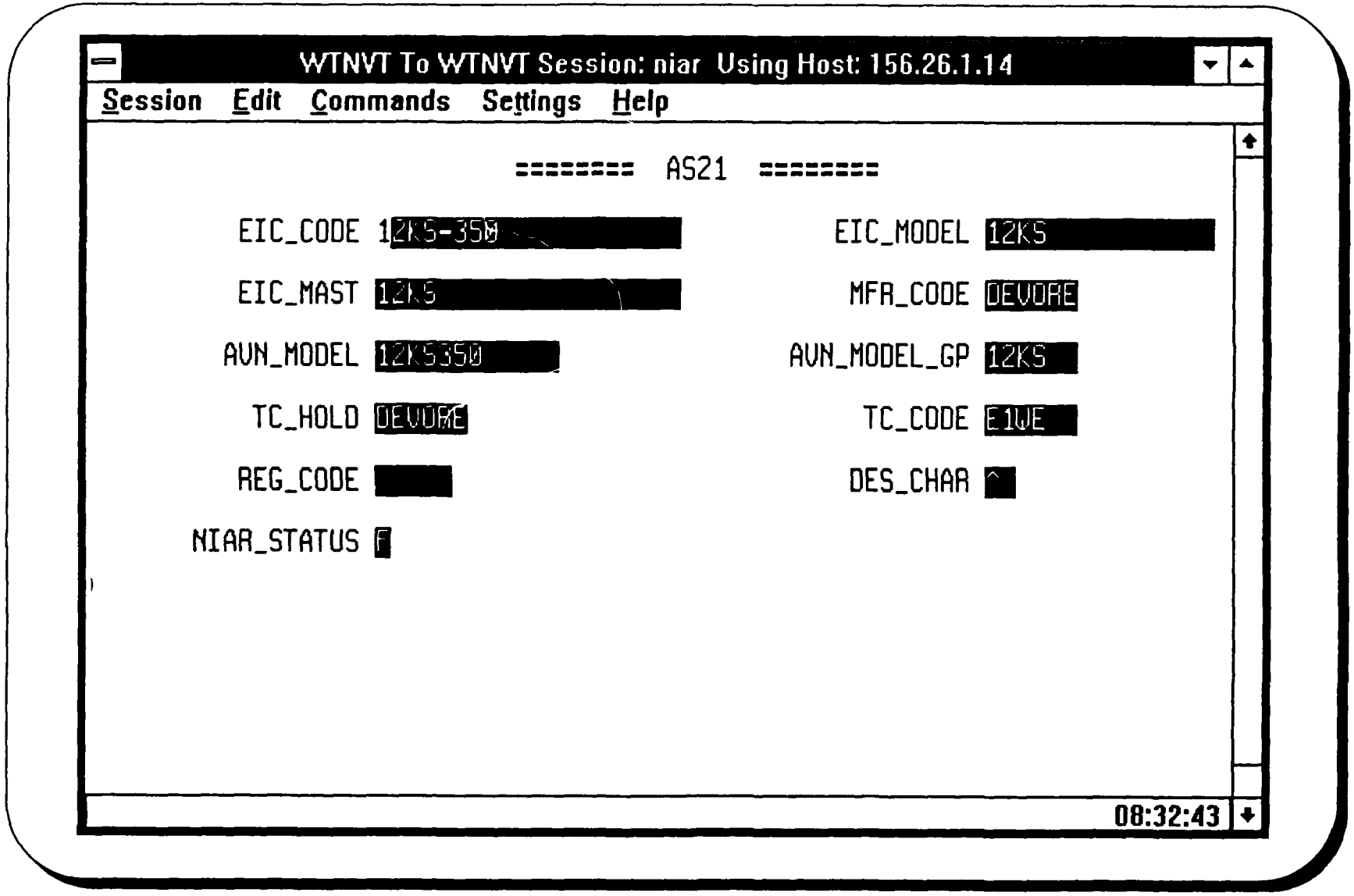


Engine Master

ASAS Screens

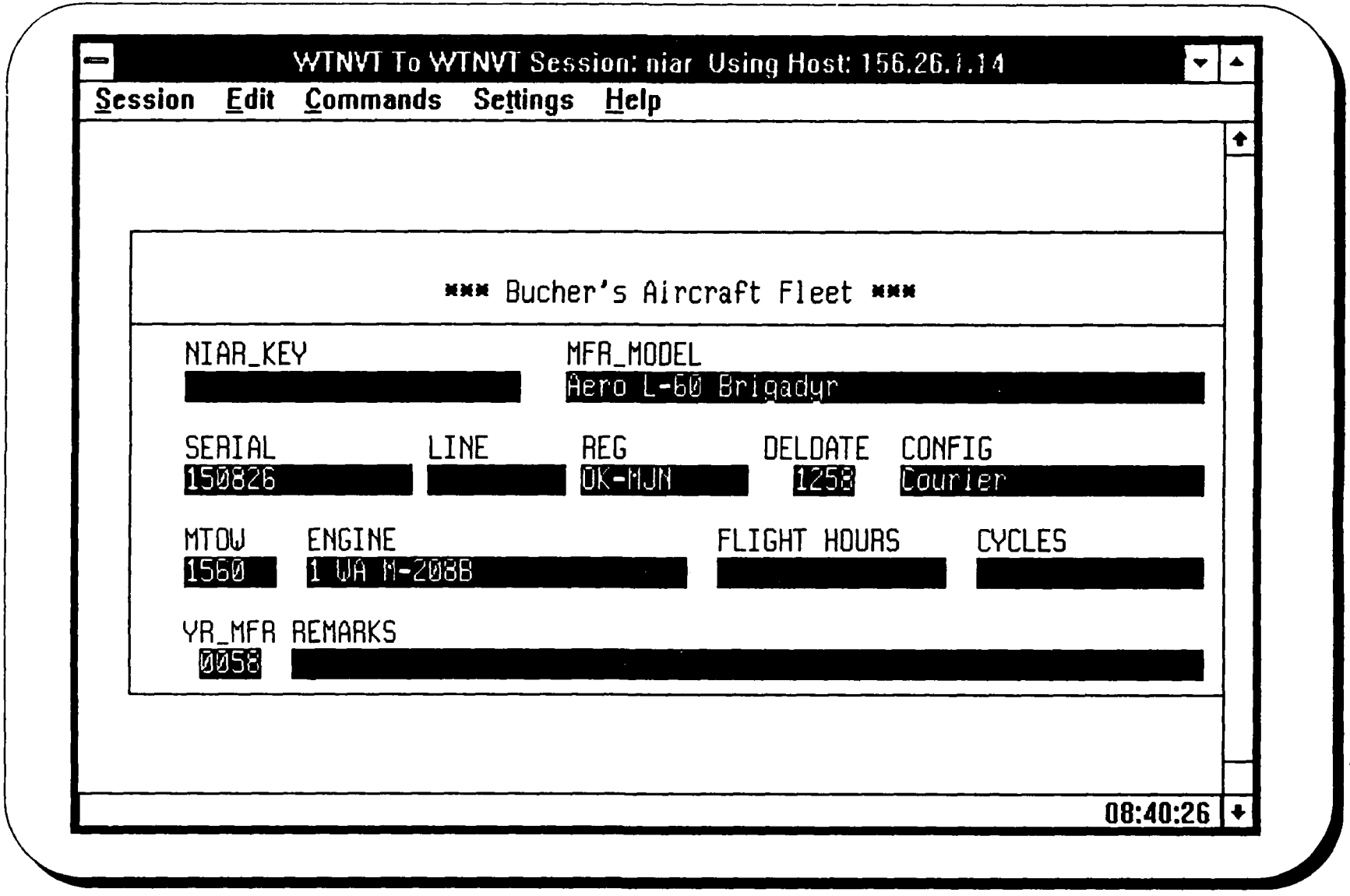


AS01 Aircraft Master Screen

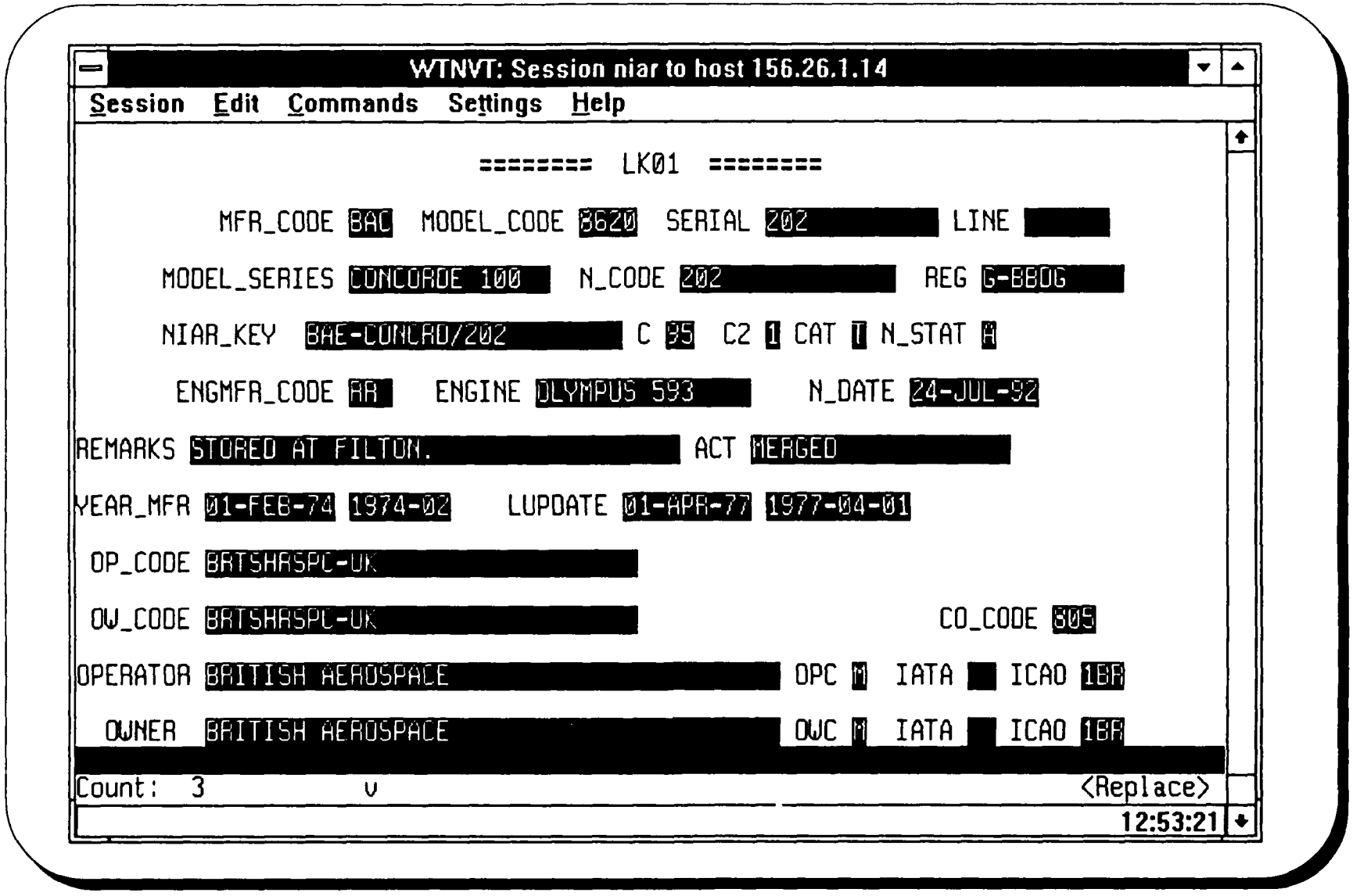


AS21 Engine Master Screen

Vendor Master Files

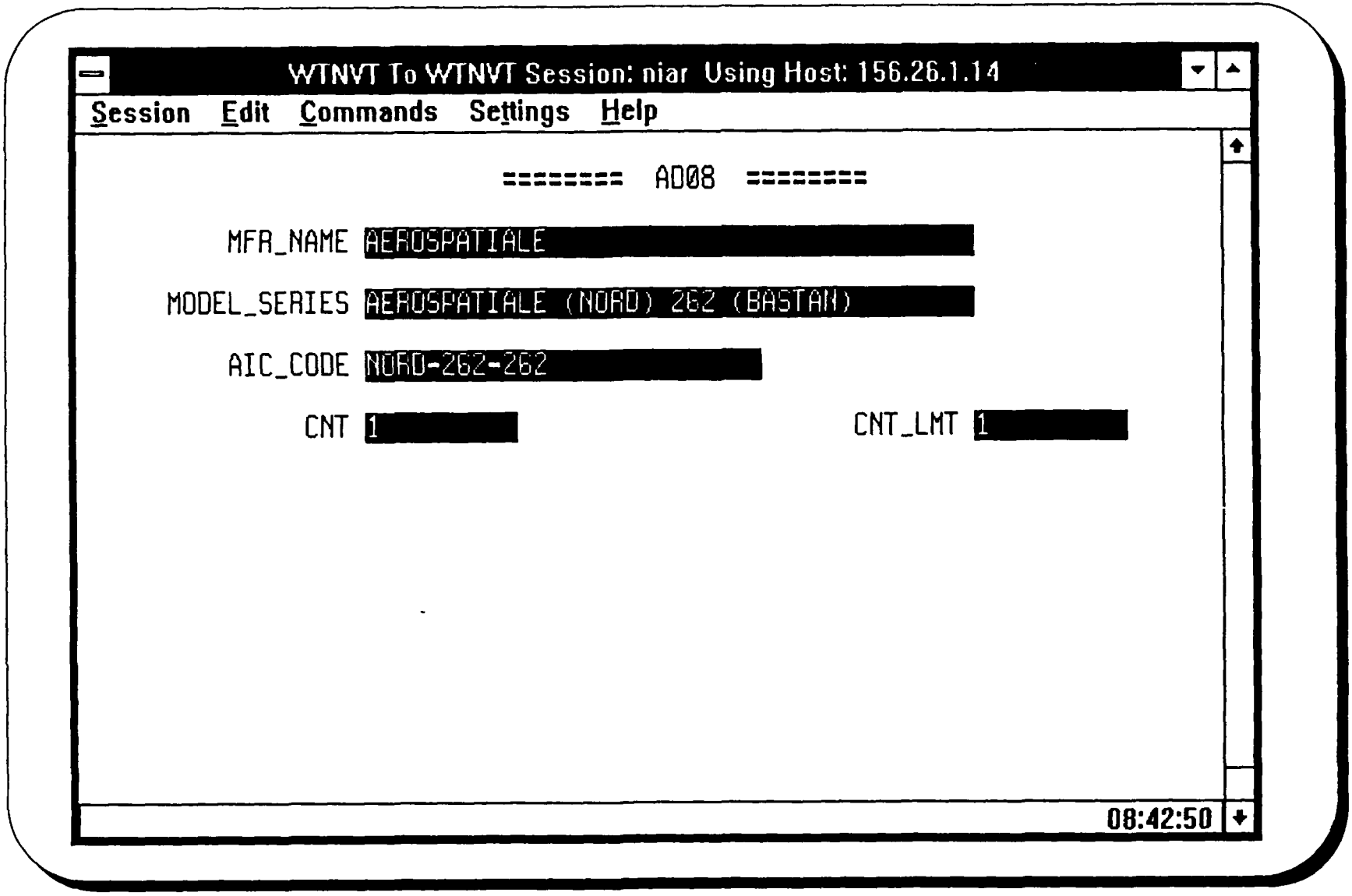


Bucher Master File - BU01

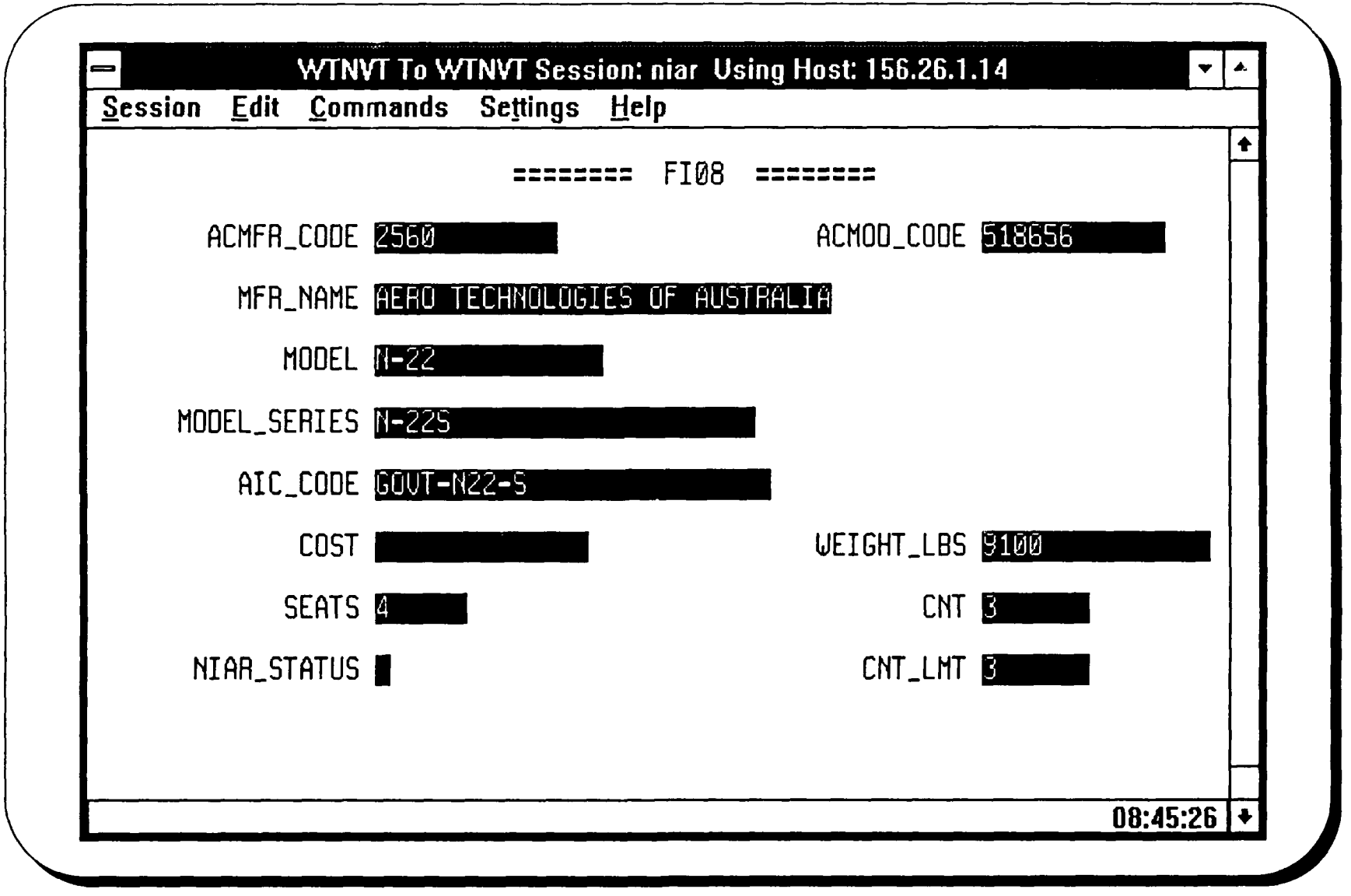


Lundkvist Master File - LK01

Vendor Cross-reference



AVDATA Cross-reference -- AD08



FORECAST Cross-reference -- FI08

Appendix F

Operation Manual

This Information System provides access to nine different commercial aviation databases. These databases are converted into normalized tables which are accessed by a relational database system (Oracle). Other tables such as those prepared by the International Air Transport Association (IATA), International Civil Aviation Organization (ICAO), Aviation Safety Analysis System (ASAS), and the Federal Information Processing System (FIPS) are also included. The power of the relational database allows the integration of information from all of these sources into a single system. The relational capability and the overlapping suppliers also permits detailed audits of the commercial vendor's data. The result is a much more comprehensive and accurate system than is currently available. Oracle also permits reasonably easy linking of tables in this system to tables in other Oracle databases.

This system makes use of the ASAS created AIC_MFR, AIC_MODEL, AIC_CODE aircraft identification codes for aircraft and similar codes for engines. The existing ASAS methodology was used to create ASAS codes for non U.S. type certificated aircraft as well. An OP_CODE is created for each aircraft owner and operator. These codes facilitate the presentation of aircraft information such as registration, serial, engine, line number, year of manufacture, hours, cycles, type certificate, and FAA seven digit code. The names, addresses, and telephone numbers of the owners and operators are also given. The other tables make it possible to select data by such criteria as country, region, or continent or even popular name.

The Information System can be accessed remotely by modem. It is menu driven with pop-up menus for unfamiliar items and exact spellings. A wildcard symbol is used when an exact spelling is not possible. A users manual is available and is being continuously updated. The information can be viewed from more than twelve different screens. These include the master, history, fleet, and hour & cycles screens for aircraft and two screens for engines. It is possible to download address labels for the operators or owners of different classes of aircraft or engines. It is also possible for the knowledgeable user to create SQL (Standard Query Language) reports using Oracle. These reports can access more information than has been included on the screens but require a detailed knowledge of Oracle as well as familiarity with the system tables and fields. It is possible to capture these reports on diskettes as they are written to the screen or download them later. A data dictionary has been prepared for the system tables and Oracle documentation is available as part of the Department of Transportation OATS contract.

International Aircraft Operator Information System Manual

Access

At present this information system resides on an AT&T 386/33 MHz computer, running UNIX and ORACLE. It has access to 7 telephone lines which are available 24 hours per day by dialing into the Wichita State University (WSU) modem pool at up to 2400 baud. The modem pool permits a single telephone number to have multiple computer connections.

The connect process is as follows: dial 316-689-3145 with the modem set for up to 2400 baud and set at 8-N-1 (8 bits, no parity, 1 stop bit) or 7-E-1. This will connect a personal computer or terminal to the WSU modem pool. Complete the connection to the NIAR computer by supplying a valid UNIX name/password. A menu selection of the terminal types will follow. Next, observe the SQL*Menu sign-on screen and enter a valid Oracle name/password. At this point the Menu Options screen will appear.

Procomm Access

If the ProComm communications software is being used, make an entry into the dialing directory for FAA-NIAR, 316-689-3145, 2400-N-8-1. If it is required to dial 9 to get an outside line, enter 9,316-689-3145. If other long distance codes or charge numbers are required, please see a communications administrator to set them up. The terminal should be set as a VT-100; this will show the proper lines and boxes in the menu screen. It is possible to change the terminal type by first using the ALT-S keys and selecting terminal setup, and then choosing VT-100. The user may also use other terminal types; however they may display different characters for the boxes.

After a successful dial-in and the connect signal is received, look for a logon prompt. However, if there is garbage on the screen, try pressing the RETURN key 2 or 3 times. If there is still no response, try the break sequence (ALT-B for ProComm Plus and Kermit). An example follows where screen prompts are in normal font, user inputs are in italic, and screen responses are in parenthesis.

logon: *username*

password: *password*

(UNIX System ...
Login last used ...)

Then the initial NIAR terminal screen will appear as follows:

Enter terminal type:

[1] Simplified vt100

[2] Simplified vt220

[3] Enhanced vt100

[4] Enhanced vt220

or

Enter [5] to page through the Online User's Manual.

[6] to page through the System Table Descriptions

At this point select whatever terminal emulation the software package will support (or select [5] to page through the Online User's Manual). Choice [1] is the most compatible type and should be chosen by the novice user. After choosing a terminal type the SQL*Menu screen appears and requests a valid Oracle username/password. Unix is case sensitive (X and x are different characters) so please use lower case. The username is displayed when entered, but the password is not shown. The user should now be connected to the Menu Options screen.

To conclude, if there are any connection troubles, first try pressing the RETURN key a few times to get the logon prompt. Next, try the Break signal from the communications package. For ProComm 2.4.2 it is the ALT-F7; for ProComm Plus and Kermit it is the ALT-B combination. If there are random displays on the screen, make sure that the terminal settings are 8-N-1 (or 7-E-1) and that the terminal type is a VT-100. If there are extra graphics on the SQL*Menu screen, the CTRL-R keys will refresh the screen.

Menu Options

The main menu options are Aircraft (whose submenu includes the forms Histories, Citation Histories, Master Aircraft File, Operator Fleet, Owner Fleet, Operator Master, Country Registration, Cycles/Hours, Registry and Operator Address Labels), Engines (whose submenu includes Operator Address Labels and Engine Master), SQL*Plus, Exit, and possibly others depending on user access. All aircraft manufacturer, model, and series information used in the forms is based on the standard aircraft identification code methodology developed as part of the Aviation Safety Analysis System (ASAS). In cases where these codes must be entered, pop-up menus of choices are supplied.

A. AIRCRAFT

The followings are AIRCRAFT submenus and they display aircraft information.

1. **Master Aircraft File.** This form allows the user to enter whatever information is known about an aircraft and the system will return screens which contain matching information about each aircraft. Typical input includes registration number, aircraft manufacturer, aircraft model, aircraft series, operator name, or owner name. It is possible to enter only a portion of the descriptive details on an aircraft and still obtain the desired output. The screens contain the remaining information as well as other attributes such as operator and owner addresses and telephone numbers.

2. **Histories.** In this form the user supplies information to the Histories form as in the Master Aircraft form and the aircraft owner, operator, and registration history is displayed on the lower half of the screen for each aircraft. Other current information is available on an associated pop-up screen.

3. **Citation Histories.** This form is very similar to the Histories form above; however, it is only to be used to find registration history information for Citation I's and II's.

4. **Operator Master.** The user supplies operator information such as operator name or operator country_code. Each operator's address is returned as well as information on each aircraft in the fleet such as AI Code (Aircraft Identification Code), registration number, engine, and serial.

5. **Operator Fleet.** The user supplies the aircraft operator name to the Fleet form. In return, types and counts of the aircraft in the operator's fleet are displayed.

6. **Owner Fleet.** The user supplies the aircraft owner name to the Fleet form. In return, types and counts of the aircraft in the owner's fleet are displayed.

7. **Country Registration.** The user selects an operator country and a country of registration via pop-up lists. The AI Codes, registration numbers and operators of the aircraft with the specified country of the operator's address and country of registration are returned. This screen is useful in showing U.S. registered aircraft which operate in other countries.

8. **Cycles/Hours.** The user supplies information to the Cycles/Hours form as in the Master Aircraft form. In return, flight hours, cycles, and daily utilization hours as well as other general information about the aircraft are displayed.

9. **Registry.** The user supplies information such as a U.S. registration number or a FAA 7-digit code for model-series. Registry information on the aircraft with the current

registration is displayed in return. Note: information is available only on airplanes and helicopters excluding home-builts.

10. **Operator Address Labels**. This form enables the user to prepare a file which contains the names and addresses of the operators of those aircraft designated by the user. This file can then be downloaded to the user's computer. Two methods, and the mixture use, are available to facilitate the use of this form. The first method, the user may enter one or more of the following fields: Manufacture Code (MFR_CODE), AIC Model (AIC_MODEL), AIC Master (AIC_MAST), AI Code (AIC_CODE), EI Code (EIC_CODE), Type Certificate Code (TC_CODE), and Registration number (REG). The second method, the user may select from the pop-up menu which is provided for the first five of the seven fields above. After the contents of the fields are specified and execute query key pressed, the names of the operators and the number of aircraft they operate will appear on page one of the form; and corresponding mailing labels will appear on page two of the form. Also, another file containing address labels for all operators selected will be created, sorted, and stored. This may be downloaded to user's disk.

B. ENGINES

The followings are ENGINES submenus and the display engine information.

1. **Operator Address Labels.** This form enables the user to prepare a file which contains the names and addresses of the operators of those aircrafts designated by the user. This file can then be downloaded to the use's computer. Two methods, and the mixture use, are available to facilitate the use of this form. The first method, the user may enter one or more of the following fields: Manufacture Code (MFR_CODE), EIC Model (EIC_MODEL), EIC Master (EIC_MAST), EI Code (EIC_CODE), Type Certificate Code (TC_CODE), and Registration Code (REG_CODE). The second method, the user may select from the pop-up menu which is provided for the first four of the six fields above. After the contents of the fields are specified and execute query key pressed, the names of the operators and the number of aircrafts they operate will appear on page one of the form; and corresponding mailing labels will appear on page two of the form. Also, another file containing address labels for all operators selected will be created, sorted, and stored. This may be downloaded to user's disk.

2. **Engine Master.** The user supplies engine or aircraft information to the form. Then, the system returns matching engine information such as engine manufacturer, EI Model Code, EI Code, and aircraft information such as AI Code, registration, serial and operator.

C. SQL*Plus

This main menu selection results in the SQL (Standard Query Language) cursor. SQL is the underlying database query language of ORACLE. The knowledgeable user is able to carry out highly specialized queries or merely browse the database tables for useful information.

D. Other

Some users may have access to forms which allow queries on the individual database of each data supplier. These databases may have additional information than that found on the Master Aircraft File form.

E. Exit

One may exit the information system by selecting this main menu option. Execute the appropriate hang-up sequence to disconnect from the WSU modem pool.

General Instruction

To move to the desired main menu option, either TAB across the options, or RIGHT-ARROW across the menu options. Then, press RETURN to accept the selection. For the Aircraft and Engines options, there are submenus. Use either the TAB key or the UP-ARROW and DOWN-ARROW to move around these submenu options. Press RETURN at the desired selection. To get out of a submenu without making a selection, press the EXIT FORM/CANCEL QUERY key. The third line from the bottom will display "Working" and then the selected form should appear on the screen.

NOTE: The third line from the bottom of the screen displays a short description of the currently highlighted menu option.

The following basic keys (see the table on next page) are to be used in the menu. The simple VT100/VT220 keys require no special mapping and work on any terminal; whereas, the 'enhanced' VT220 and VT100 require escape sequences for actual VT100/VT220 keys. Hence, when in doubt use the 'simplified' emulation.

Note: (9) means keypad 9. Please make sure the NUM LOCK is turned off for Kermit; NUM LOCK should be on for ProComm.

^E means ctrl E. Both keys need to be pressed at the same time.

Press ^K at any time to list the function keys used in forms.

COMMAND	SIMPLE VT100/ VT220	ENHANCED VT220	ENHANCED VT100
Enter Query	^E	F11	(6)
Execute Query	^X	F12	(,)
Exit Form/Cancel Query	^Z	PF4	PF4 ^B
Commit/Accept	^O	DO ^O	PF3 ^O
Next Field	TAB ^L	TAB	TAB
Previous Field	^A	PF1 RETURN	PF1 RETURN PF1 TAB
Next Block	^D	NEXTSCREEN	(-)
Previous Block	^U	PREVSCREEN	(9)
Next Record	^N	PF1 NEXTSCREEN	PF1 (-)
Previous Record	^P	PF1 PREVSCREEN	PF1 (9)
Count Query Hits	^B	PF3	PF1 PF3
List of function keys for vt220 emulation	^K	^K	^K
List of options for selected fields	^F	^F FIND	^F (.)
Help	^W	^W HELP	^W PF2

Examples

The following examples will assist the user in becoming familiar with the Aircraft forms and the Engines forms. When finished with a form, press the EXIT FORM key to get back to the main menu. Also, at the end of this section there will be selected examples of queries using SQL*Plus.

A. AIRCRAFT. Press return at the Aircraft main menu option to obtain the submenu for aircraft forms.

Master Aircraft File. Select the Master Aircraft File from the menu.
1. Query 1. In order to find basic information about a particular CITATION III, begin the query by pressing the ENTER QUERY (^E for the simplified keyboard) key. Now, to insert the correct ASAS information, either enter the codes (if known) or use the pop-up lists for ASAS_MFR, AIC_MODEL, and AIC_CODE. The cursor should be in the ASAS_MFR field. Press ^F to bring up a pop-up list of all the manufacturers of aircraft in the Master Aircraft database. Press TAB to get the cursor in the "Find" field, enter C and RETURN so that the list will scroll up to the c's. Then UP-ARROW or DOWN-ARROW to CESSNA. Alternately, UP and DOWN-ARROW to the desired entry. When at CESSNA, press RETURN. The pop-up list is removed from the screen and CESSNA is inserted into the ASAS_MFR field. Press TAB to get to the next field. Press ^F again to get a list of possible AI Model Codes for Cessna airplanes, DOWN-ARROW to CE-650 and press RETURN. AIC_MODEL is now filled in. Next TAB to the ASAS_AIC_CODE field and press ^F. The only choice is CE-650-650 so press RETURN there. Now, assuming that all of the information available on the airplane has been entered, press the EXECUTE QUERY key. Note: the third line from the bottom of the screen displays "Working". A record of a CE-650-650 airplane should appear on the screen. If there are other CE-650-650 airplanes in the database, use the DOWN-ARROW (and UP-ARROW) to view all of the records which meet the query selection criteria.

Note: the second line from the bottom of the screen displays a count. This count is misleading; it indicates how many records have been looked at for the current query. If five records have been looked at and the user goes back to the first record, count will still be five. Also, assume the user is at record 3 of 7 records which match a query. Notice the two arrows (one pointing up and one pointing down) that indicate that there are additional records before and after the displayed record.

2. Query 2. If information is desired about an aircraft with registration 'F-BVGA', begin the query process by pressing the ENTER QUERY key. TAB over to the REGISTRATION field and type in the registration number. Press the EXECUTE QUERY key. Either the record with the information on that airplane will appear or the third line from the bottom will indicate: "Query caused no record to be retrieved. Re-enter."

Note: if no records are found, press the CANCEL QUERY key to cancel that particular query, then start with ENTER QUERY again to do a new query. If a record does come up and the user desires to move on and do another query, press ENTER QUERY to begin the query process again.

If an aircraft is found in the Master Aircraft File form, check to see if the ICAO (International Civil Aviation Organization) field is filled in. If so, press NEXT BLOCK and a pop-up page will overlap half of the page. This new half screen contains the IATA (International Air Transport Association) address information on this ICAO code. The user can then compare the vendor's address with IATA's address. There might also be

some contact names and telex numbers in the IATA address information. Press PREVIOUS BLOCK to return to the full first page again.

3. Query 3. Now, suppose it is required to find information on a particular airplane whose AI Model Code is B-707 and whose serial number starts with 18. Press the ENTER QUERY key to begin. TAB over to AIC_MODEL field and enter B-707. TAB over to SERIAL and type 18%. Assume now that the user wants to know how many records will be returned for this query before he looks at all of the records. Press the COUNT QUERY HITS key. The third line from the bottom of the screen should indicate that the system is working. (Note: sometimes the COUNT QUERY HITS process takes a while.) After the third line from the bottom of the screen has indicated the number of query hits, press the EXECUTE QUERY key. One of the aircraft that answers the query description should appear on the screen. To see any other aircraft with AIC_MODEL equal to B-707 and SERIAL beginning with 18 use the DOWN-ARROW to view the other records.

Note: % is a wild card symbol which can be put at the beginning, middle, or end of a field. Caution, the query will take much longer if the % sign appears at the beginning.

Press EXIT FORM to return to the main menu.

History. Select the Histories form from the Aircraft menu.
1. Query 1. Begin by looking for an AI Code for an airplane manufactured by the British Aerospace Corp. Press the ENTER QUERY key to begin the query. At the MFR field press ^F for a pop-up list of manufacturers. ARROW-DOWN to BAC and press RETURN. TAB to the MOD field and press ^F. Press RETURN at any of the AI Models. TAB to the AIC field and press ^F. Press RETURN at an AI Code. Now, press the EXECUTE QUERY key. A record of one of the airplanes with the chosen AI Code will appear on the screen. The top half of the screen has the most current information about the airplane. The bottom half of the page has the registration history of the airplane. (The bottom information may be delayed even though a record has appeared on the top half of the screen. If the bottom is delayed the third line from the bottom of the screen should indicate that the system is "Working".) If all of the registrations are not shown on the bottom half of the page (i.e. the last entry does not have a '90' or '95' in the field C), press the NEXT BLOCK key to move the cursor to the bottom half of the screen (the registration block). This permits the user to ARROW-UP and DOWN through the registration records. One may also want to get to the bottom half of the screen in order to view the REMARKS field which is a hidden field to the right of OWNER. After pressing the NEXT BLOCK key to get to the bottom half of the screen, TAB across the fields until the REMARK field comes to view. Continue to press TAB in order to wrap around to the beginning fields. To get back to the upper half, press the PREVIOUS BLOCK key. While in the upper half of the screen, TAB through the fields. Notice that TAB skips over the LINE field. The user may only TAB to fields that may be queried. Note that when the TAB is pressed at the OWNER field, a new page appears. This page has additional current information about the airplane. One more TAB returns the user to the first page.

While in the upper half of the first screen, press the DOWN-ARROW key to see if there are any more aircraft in the database that have the selected AI Code.

2 Query 2. Suppose the user is trying to find information about an aircraft which has crashed or has been retired. Note the field "C" on the upper half of the screen. A "95" in this field indicates that the airplane is currently in operation, whereas a "90" in the field indicates that the airplane is no longer in operation. Therefore, to find a retired B-707-328, begin by pressing the ENTER QUERY key. Then, TAB to the AIC field and type B-707-328. TAB to the C field and type 90. Press the EXECUTE QUERY key and if any retired B-707-328 airplanes exist in the database, one should appear. Arrow-down to look at all of the remaining entries, if any.

3 Query 3. Suppose the user wants to look at the fleet of aircraft operated by United Airlines. Begin by pressing the ENTER QUERY key. TAB over to the OPERATOR field. Type in UNITED AIRLINES. Press the EXECUTE QUERY key. One may find that no records are retrieved. By looking at the second line from the bottom, note that the system is still in ENTER QUERY mode. So, to make a new query just TAB over to the OPERATOR field again and type UNITED%. The user may have to ARROW-DOWN through several records because some of the operators found might be UNITED AFRICAN AIRLINES, UNITED AIR, etc... At some point UNITED AIR LINES should appear. Now the user knows the spelling for United Airlines as it appears in the history database. In order to only see aircraft operated by United Airlines, begin a new query by pressing the ENTER QUERY key. TAB over to the OPERATOR field. Type in UNITED AIR LINES. Press the EXECUTE QUERY key. Now, the only aircraft records that appear should have United Airlines as the operator.

Press EXIT FORM to return to the main menu.

Citation History. Select the Citation Hist. form from the Aircraft menu.
1. Query 1. See the previous examples on the Histories form. However, note that manufacturer is assumed to be Cessna. The user can still press ^F at the MOD and AIC fields for pop-up lists of the possible models and series of Citation I's and II's for which queries can be performed.

A different Histories form was necessary due to Cessna's unique procedure of changing the serial number when a Citation is converted from a two-pilot configuration to a one-pilot configuration or vice versa. Hence, note the additional serial field in the Aircraft History block (the lower half of the screen). The user is able to ascertain if the serial has changed at any time in the history of the aircraft.

Press EXIT FORM to return to the main menu.

Operator Master. Select the Operator Master form from the Aircraft menu.
1. Query 1. In order to view the information on the operator "CC AIR", begin by pressing the ENTER QUERY key. The cursor is already in the operator name field, so type CC

AIR%. Then press the EXECUTE QUERY key. A record of an operator whose name begins with "CC AIR" should appear on the screen. ARROW-DOWN to additional records if necessary until CC AIR of Charlotte, NC is found. The operator address information is found on the upper part of the screen. The lower part of the screen contains information on each aircraft in the operator's fleet. If the lower part is filled with aircraft, press the NEXT BLOCK key to move the cursor to the lower part of the screen. ARROW-DOWN to view additional aircraft that could not fit on the original screen. Press the PREVIOUS BLOCK key to return to the upper part of the screen before entering new queries.

2. Query 2. To view all of the operators with addresses in a certain country, begin by pressing the ENTER QUERY key. TAB to the COUNTRY_CODE field. An appropriate FIPS (Federal Information Processing Standards) country code must be entered here. Press ^F for a pop-up list of countries along with their corresponding FIPS Code. ARROW-DOWN until the desired entry is reached. Press RETURN at that entry. Or, TAB to the "Find" field, enter a letter and press RETURN. All of the FIPS Codes beginning with that letter will appear on the pop-up list. Press RETURN at the desired entry and the pop-up list goes away while the COUNTRY_CODE field is filled in. Then, press the EXECUTE QUERY key. A record of an operator with the chosen country should appear on the screen. ARROW-DOWN to view additional records for the chosen operator country.

Press EXIT FORM to return to the main menu.

Operator Address Labels. Select the Op Addr Labels form from the Aircraft menu.
1. Selection Of AI Master. When the Operator Address Labels form option is selected, a pop-up list immediately covers part of the page when the form appears. As the directions on the top indicate, select the Master AI Code to indicate what operator labels are to be created. For the first pop-up list, DOWN and UP-ARROW to the choice for manufacturer. Or, TAB once to get to the "Find" field. Put in the beginning letters for the manufacturer desired and press RETURN. Use the DOWN and UP-ARROW from this point to get the exact manufacturer. Press RETURN at the choice for manufacturer. The pop-up list is removed and the MFR_CODE field is filled in with the choice. Next, TAB to the AIC_MODEL field Another list pops up automatically. Arrow to the choice for AI Model and press RETURN. TAB to the AIC_MASTER field and press RETURN at the choice for AI Master. Now the AI Master has been chosen. TAB to the next field. The form asks the user to fill in this field with an x (or X) if the selection is correct. If address labels for airplanes with this AI Master are not desired or the criteria are incorrect, press RETURN here without entering an x. The user will be brought back to the original pop-up list to begin the selection process again. If the session is completed, press the EXIT FORM key to get back to the main menu If the user wants address labels for operators of airplanes with the selected AI Master, see the next example

2. With capture. Assume the steps in the previous example have been successfully completed. Once the field AIC_MASTER is filled in, TAB to the next field. Enter an "X"

to indicate that labels of operators of the airplanes with the chosen AI Master are desired and then press the COMMIT/ACCEPT key. Make note of what the report will be called in case of need for future reference. Otherwise, press RETURN and a new screen will appear with some directions displayed. Follow the appropriate directions for either ProComm or Kermit to capture the output on disk. After the directions have been followed, the label information may be found in an ASCII file in the ProComm or Kermit directory on the personal computer. The user may edit the file with any word processor to prepare address labels or include the information in a report.

3. WithOUT capture. Assume that the AI Master has been chosen. Enter an X in the field that follows the AIC_MASTER and press the COMMIT/ACCEPT key. Then, press RETURN. A new screen appears. Instead of capturing the output on disk, follow the directions to get a screen report only. Note, when these directions are followed the addresses are not saved to disk. The addresses will only scroll across the screen. Follow the additional directions to get back to the Operator Address Labels form.

Press EXIT FORM to return to the main menu.

Operator Fleet. Select the Operator Fleet form from the Aircraft menu.
1. Query 1. In order to get a list of the types and counts of all the aircraft in American Airline's fleet first press ENTER QUERY. Enter 'AMER%' into the operator field and press EXECUTE QUERY. Arrow to the field containing AMERICAN AIRLINES and press the NEXT-BLOCK key. After a short time a list of the American fleet will appear in the bottom half of the screen. Use the DOWN-ARROW to view the entire fleet if it will not all fit on the screen. To view another operator's fleet press PREVIOUS BLOCK and then press ENTER QUERY etc. again. To exit the form press EXIT FORM.

Owner Fleet. Select the Owner Fleet form from the Aircraft menu.
1. Query 1. Follow the exact same procedure as in the operator query to view the fleet owned by a particular aircraft owner.

Country Registration. Select the Country Registration form from the Aircraft menu.
1. Query 1. Upon choosing the Country Registration form an initial pop-up list will cover the screen. Do Not begin by pressing the ENTER QUERY key. The user should assume that he is already in ENTER QUERY mode. Begin by choosing a country to fill in the COUNTRY OF OPERATION field. Either ARROW-DOWN to select a country or TAB to the "Find" field, enter the first letters of the country desired and press RETURN. DOWN and UP-ARROW from this point to the desired country. At the choice for country press RETURN. The pop-up list goes away and the country is filled into the COUNTRY OF OPERATOR field.

Press TAB to go to the field COUNTRY OF REGISTRATION. Another pop-list appears automatically. Press RETURN at the choice of registration country. The pop-up list goes away and the country is filled into the COUNTRY OF REGISTRATION field.

Press the EXECUTE QUERY key. This form may run a little slow, but note the third line from the bottom indicates the system is "Working". Any found records should appear on the screen. ARROW-DOWN if the screen is full to see any additional records. If no records are found, the screen will remain blank, the cursor will be blinking in the first field of AIC_CODE and the third line from the bottom will no longer indicate that the system is "Working".

Press the NEXT BLOCK key to begin a new query selection. Press the EXIT FORM key to quit.

Cycles/Hours. Select the Cycles/Hours form from the Aircraft menu.
1. Query 1. Suppose the user is interested in flight hour and cycle information about Boeing 707-300 aircraft. Press the ENTER QUERY key to begin. Press ^F at MFR_CODE, AIC_MODEL, and AIC_CODE to get pop-up lists of options in order to fill in the correct ASAS information (See Query 1 of the Master Aircraft File form). Or, if the AI Code is already known, just TAB over to AIC_CODE and enter B-707-300. Press the EXECUTE QUERY key. The screen should display general aircraft information as well as flight hour, cycle, and daily utilization hour information for an aircraft with the chosen AI Code. DOWN-ARROW to see additional records of aircraft with the AI Code. To exit the form press the EXIT FORM key.

Registry. Select the Registry form from the Aircraft menu.
1. Query 1. Suppose the user is interested in registry information about an aircraft with a specified registration number. Begin by pressing the ENTER QUERY key. Type in the registration number in the first field REG. Press the EXECUTE QUERY key and the current registry information on the aircraft will be returned. To exit the form press EXIT FORM.

B. ENGINE. Select the Engine main menu option to obtain the submenu of engine forms.

Operator Address Labels. Select the Op Addr Labels option from the engine menu.
1. Selection of EI Code. When the Operator Address Labels form appears, a pop-up list immediately covers part of the page. In order to describe the type of engine for which the user wants operator address labels, EI Code must be chosen. The pop-up lists help the user select an appropriate EI Code. For the first pop-up list, DOWN and UP-ARROW to the choice for engine manufacturer. Or, TAB once to get to the "Find" field. Put in the beginning letters for the manufacturer desired and press RETURN. Use the DOWN and UP-ARROW from this point to reach the desired manufacturer. At the choice for manufacturer press RETURN. The pop-up list is removed and the MFR_CODE field is filled in with the choice. TAB to the EIC_MODEL field and another pop-up list will appear. ARROW to the choice for EI Model and press RETURN. TAB to the EIC_CODE field and press RETURN at the desired EI Code. EI Code has now been chosen. TAB to the next field where the form directs the user to enter x (or X) if the selection is correct. If address labels for operators of engines with the chosen EI Code are

not desired, press RETURN here without entering an x. The user will be brought back to the original pop-up list to begin the selection process again. If the session is completed, press the EXIT FORM key to get back to the main menu. If the user wants address labels for the operators of the engines with the selected EI Code, see the next example.

2. With Capture. Assume the steps in the previous example have been successfully completed. Once EIC_CODE is filled in, TAB to the next field and enter "X". Then press the COMMIT/ACCEPT key. Make note of what the report will be called in case of need for future reference. Then, press RETURN and a new screen will appear with some directions displayed. Follow the appropriate directions for either ProComm or Kermit to capture the output on disk. After the directions have been followed, the label information may be found in an ASCII file in the ProComm or Kermit directory on the personal computer. The user may edit the file with any word processor to prepare address labels or include the information in a report.

3. WithOUT Capture. Assume that the EI Code has been chosen. Enter an x in the field that follows EIC_CODE and press the COMMIT/ACCEPT key. Then, press RETURN. A new screen appears. Instead of capturing the output on disk, follow the directions to get a screen report only. Note, when these directions are followed the addresses are not saved to disk. The addresses will only scroll across the screen. Follow the additional directions to get back to the Labels form.

Press EXIT FORM to return to the main menu.

Engine Master. Select the Engine Master form from the Engines menu.
1. Query 1. Assume the user wants to look at all of the U.S. registered aircraft with engines that have ARRIEL as the EI Model. Press the ENTER QUERY key to begin the query. TAB to EIC_MODEL and enter ARRIEL. TAB to REG and enter N%. Press the EXECUTE QUERY key and if any records are found, one should appear on the screen. ARROW-DOWN to see additional records.

Press EXIT FORM to return to the main menu.

C. SQL*Plus. In this section, selected easy queries using SQL will be presented. However, there are many other commands in SQL so please reference an ORACLE book if more information is desired. There are also a very large number of tables used in this information system and a detailed knowledge of these tables and Oracle is required to do anything but the simplest queries using SQL*Plus.

Query 1. Select the SQL*Plus choice from the menu. To be able to do queries on particular table, the user will need to know the names of the fields in the table. AS01 contains ASAS code information. To find out what the fields are in AS01, type the following at the SQL prompt:

```
SQL> describe AS01
```

and press RETURN. A list of the names of the fields in AS01 as well as their type and size should scroll up on the screen. To show the number of AI Codes where 'B-707' is the AI Model, type:

SQL> select count(*) from AS01 where aic_model = 'B-707';

The semicolon is necessary at the end of this query statement. After RETURN is pressed, the screen should display the number of entries in the table with AIC_MODEL equal to B-707.

Query 2. Assume that the user has done a describe on the table NA01 and found that there are more fields in NA01 than are included on the Master AC File form. Further, assume the user has found a particular aircraft in the Master form but would like to see if na01 (or NA01 since SQL*Plus is not case sensitive, except for text inside of quotes) has any more information than the form showed. Say the user is looking at an aircraft with registration F-BVGA. Type the following at the SQL prompt.

SQL> select * from na01 where reg = 'F-BVGA';

This query selects all of the fields in NA01 where the airplane registration is F-BVGA. If there is not an aircraft in NA01 with this registration, the screen should indicate "no rows selected." Otherwise, the information should follow the field names on the screen.

Query 3. The table IA01 has the IATA address information. The table NA02 has the country, country code, region code, and continent code. Assume the user desires to see all of the operators in ia01 who are in the region South Africa. The table IA01 does not have the region codes, so it is necessary to join IA01 with NA02 by using the COUNTRY_CODE in IA01 and the FIPS_CODE in NA02 to get the desired result.

```
SQL> select distinct co_name, b.country from ia01 a, na02 b
       where country_code = fips_code
       and region = 'SAF';
```

Press RETURN. Note the "b." in front of country. This is necessary because country is a field of both IA01 and NA02. The query must qualify which table the field COUNTRY should come from.

Type "quit" or "exit" to return to the main menu.

D. EXIT. Move the cursor to exit and press RETURN to exit the information system. Execute the appropriate hang-up sequence to disconnect from the WSU modem pool.

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