



COCESNA'S FLIGHT PLAN STATISTICS



Flight No.	Origin	Destination	Carrier	Class	Status	Remarks
COCESNA 001	Managua	San Jose	COCESNA	Y	OK	
COCESNA 002	San Jose	Managua	COCESNA	Y	OK	
COCESNA 003	Managua	San Jose	COCESNA	Y	OK	
COCESNA 004	San Jose	Managua	COCESNA	Y	OK	
COCESNA 005	Managua	San Jose	COCESNA	Y	OK	
COCESNA 006	San Jose	Managua	COCESNA	Y	OK	
COCESNA 007	Managua	San Jose	COCESNA	Y	OK	
COCESNA 008	San Jose	Managua	COCESNA	Y	OK	
COCESNA 009	Managua	San Jose	COCESNA	Y	OK	
COCESNA 010	San Jose	Managua	COCESNA	Y	OK	

get data
getConnection.
connection.
SQL = "SELECT
statement.ex





FLIGHT PLAN IN CENTRAL AMERICA

COCESNA through the Air traffic control center CENAMER receives the flight plan of each aircraft that departs, arrive and overflight Central America airspace.

Unfortunately not all flight plans are correct, COCESNA has 24/7 staff repairing flight plans.

Since 2016 COCESNA developed an application called Flight Plan Validator the main objective was to filter each flight plan coming to CENAMER Control, it was a measure implemented by COCESNA to mitigate flight plan issues, for statistics purposes and to increase safety.



FLIGHT PLAN VALIDATOR PHASES

PHASE 1

- The flight plan validator will have a three month trial period in which the application will be verified and if necessary the period will be increased.
- Users questions will be answered during this period.
- The database will be updated with the types of aircraft that are rejected due lack of information.

ADVANCE PHASE 1: 90%



FLIGHT PLAN VALIDATOR PHASES

PHASE 2

- The route of flight will be checked according to ICAO specifications. .
- Users questions will be answered during this period.
- This phase will have a three month trial period and if necessary it will be increased.
- COCESNA will start route validation on may 2018

ADVANCE PHASE 2: 0%



COCESNA'S effort to flight plan issues in Central America

COCESNA developed a course specially designed for AIS personnel and flight .

In order to reinforce the basic knowledge of AIS officers in Central America, the course was approved by ICAO personnel, using the TRAIN AIR PLUS methodology.

Staff have been trained in almost all Central American countries has also been supported in resolving specific flight plan situations in each country.



ANALYSIS

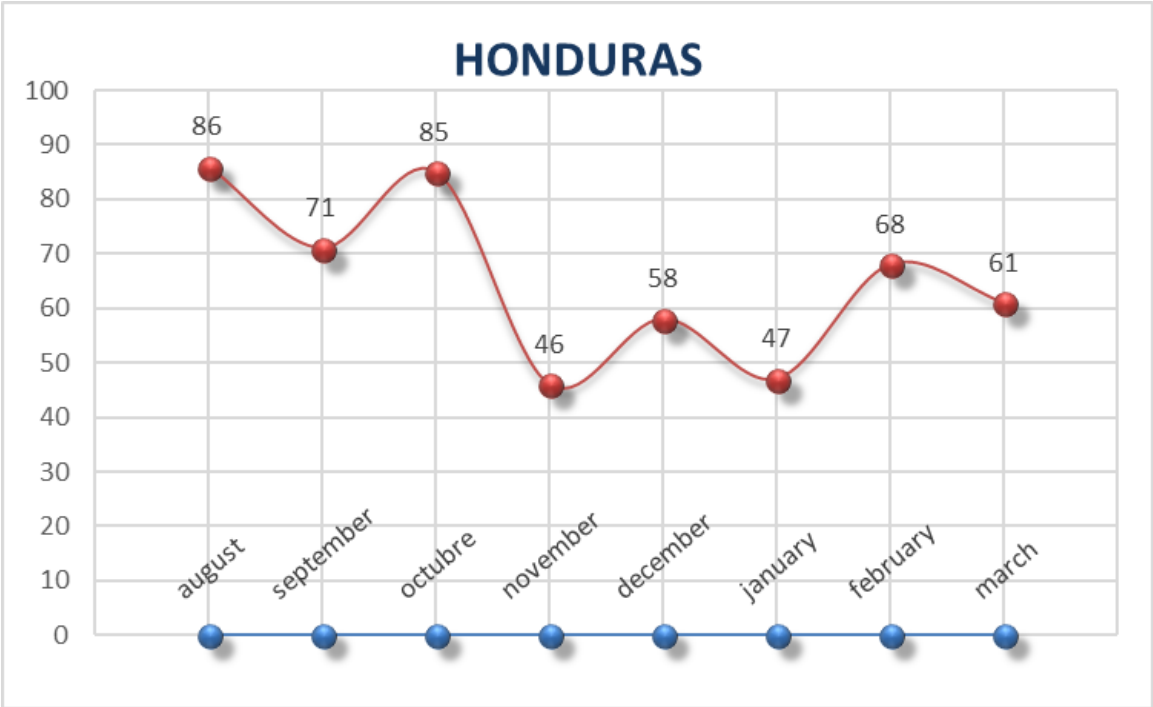
- Most of the problems that arise are related to deficiencies and non-compliance with the standards and recommended practices in the PANS ATM Doc. 4444, mainly by the operators, as well as by AIS/ATS units that amend or modify the plans already sent by the operators.
- COCESNA found that the problem lies in the basic knowledge that an AIS officer, flight dispatchers and air traffic controllers must have.
- The person delivering the physical flight plan is not always aware of the ICAO standard procedures used to fill each part of the flight plan
- The airline doesn't have a copy of the AIS flight plan this results in lack of knowledge of the flight plan issued to all control centers, this results in no complain to the AIS office.
- In cases the flight plan on board the aircraft is in part different from the one transmitted by the AIS office, this can result in an air traffic incident.
- AIS personnel should have an English test to assure level 4.



FLIGHT PLAN STATISTICS

HONDURAS			
MONTH	SENT	REJECTED	REJECTED AVERAGE
AUGUST	2665	86	3.23%
SEPTEMBER	2366	71	3.00%
OCTOBER	2149	85	3.96%
NOVEMBER	2122	46	2.17%
DECEMBER	2511	58	2.31%
JANUARY	2338	47	2.01%
FEBRUARY	2239	68	3.04%
MARCH	2640	61	2.31%
	19030	522	2.74%

FLIGHT PLAN STATISTICS





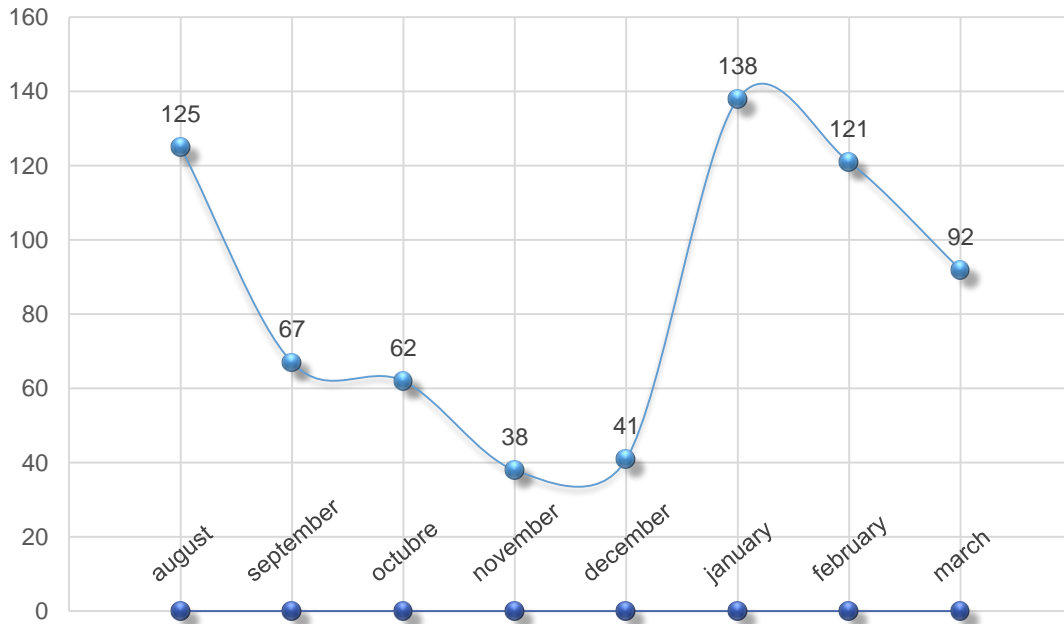
FLIGHT PLAN STATISTICS

AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH

GUATEMALA		
SENT	REJECTED	REJECTED AVERAGE
2080	125	6.01%
1902	67	3.52%
1954	62	3.17%
2113	38	1.80%
2152	41	1.91%
2053	138	6.72%
1852	121	6.53%
1926	92	4.78%
16032	684	4.27%

FLIGHT PLAN STATISTICS

GUATEMALA

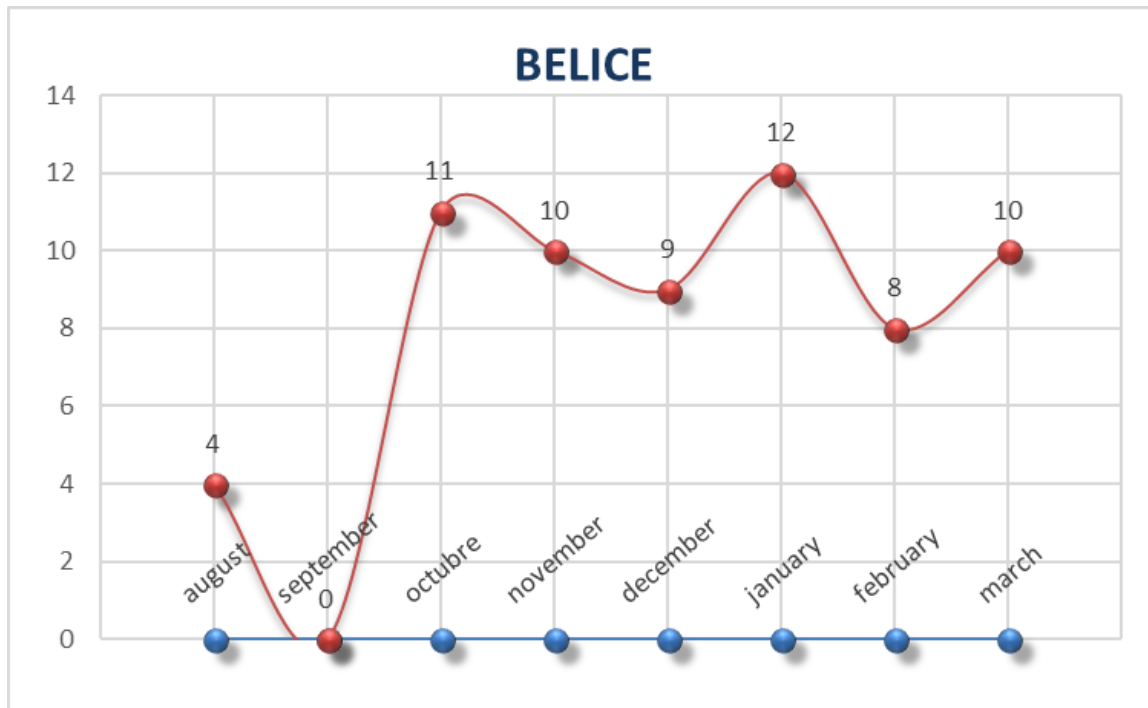




FLIGHT PLAN STATISTICS

BELIZE			
MONTH	SENT	REJECTED	REJECTED AVERAGE
AUGUST	477	4	0.84%
SEPTEMBER	320	0	0.00%
OCTOBER	382	11	2.88%
NOVEMBER	474	10	2.11%
DECEMBER	591	9	1.52%
JANUARY	582	12	2.06%
FEBRUARY	572	8	1.40%
MARCH	553	10	1.81%
	3951	64	1.62%

FLIGHT PLAN STATISTICS





FLIGHT PLAN STATISTICS

AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH

EL SALVADOR		
SENT	REJECTED	REJECTED AVERAGE
2444	18	0.74%
2297	30	1.31%
2278	22	0.97%
2414	33	1.37%
2527	36	1.42%
2443	30	1.23%
2146	29	1.35%
2165	42	1.94%
18714	240	1.28%

FLIGHT PLAN STATISTICS



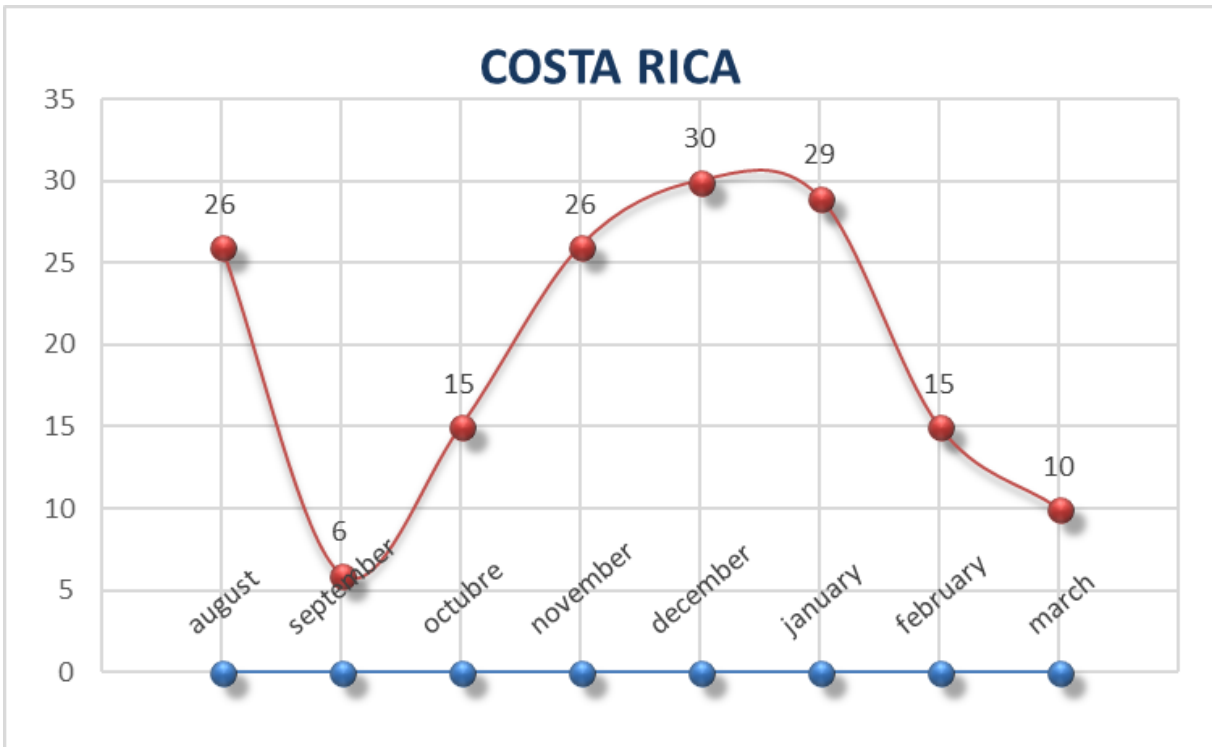


FLIGHT PLAN STATISTICS

AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH

COSTA RICA		
SENT	REJECTED	REJECTED AVERAGE
1039	26	2.50%
848	6	0.71%
862	15	1.74%
980	26	2.65%
1231	30	2.44%
1309	29	2.22%
1229	15	1.22%
1402	10	0.71%
8900	157	1.76%

FLIGHT PLAN STATISTICS





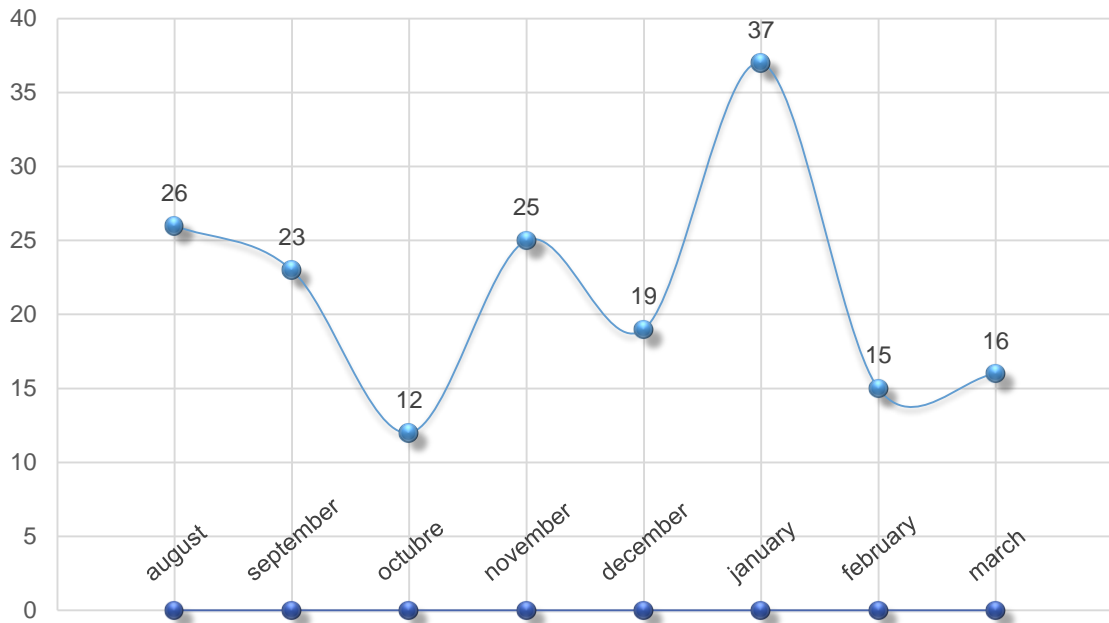
FLIGHT PLAN STATISTICS

AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH

NICARAGUA		
SENT	REJECTED	REJECTED AVERAGE
1026	26	2.53%
875	23	2.63%
917	12	1.31%
1004	25	2.49%
1098	19	1.73%
1068	37	3.46%
905	15	1.66%
962	16	1.66%
7855	173	2.20%

FLIGHT PLAN STATISTICS

NICARAGUA





TOP 10 FLIGHT PLAN ERRORS

Error	Total	
-- DUPLICATE FPL STORED	7371	60.0%
-- WRONG NUMBER OF FIELDS	1930	15.7%
-- FILL REG/ IN FIELD 18 ONLY IF DIFFERENT - -- FROM THE AIRCRAFT IDENTIFICATION IN -- ITEM 7. DOC 4444	990	8.1%
-- AIRCRAFT TYPE NOT FOUND IN DATABASE	625	5.1%
-- INCONSISTENT ITEM 10 AND 18 PBN/	494	4.0%
-- INCONSISTENT ITEM 10 AND 18 Z WITH NO -- DAT/ OR COM/ OR NAV/	256	2.1%
-- INVALID FIELD 18 SYNTAX	201	1.6%
-- INCONSISTENT PBN/ VALUE	147	1.2%
-- INVALID SEL/ ELEMENT	140	1.1%
-- NON RVSM STATUS	136	1.1%



SOUTH AMERICA FLIGHT PLAN STATISTICS





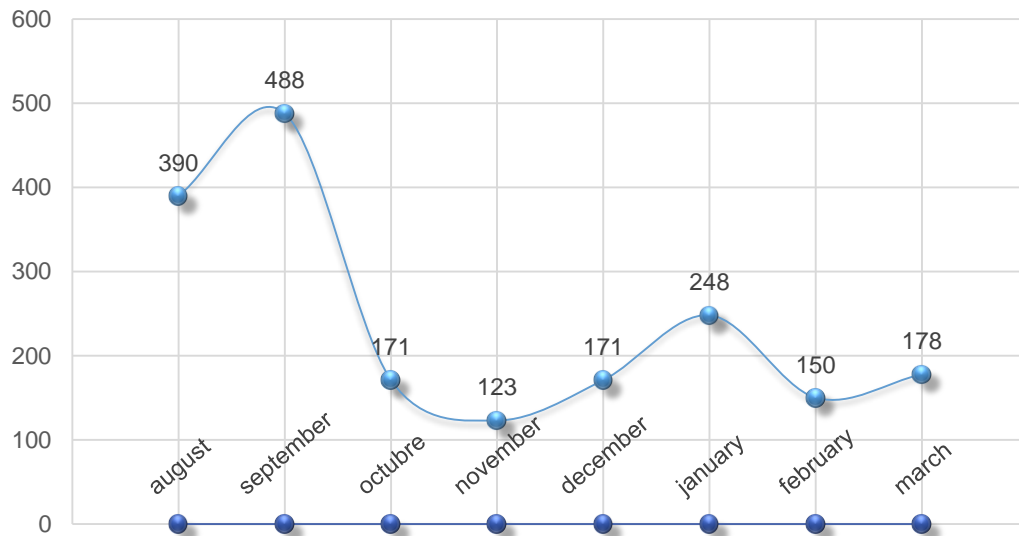
FLIGHT PLAN STATISTICS

AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH

PANAMA		
SENT	REJECTED	REJECTED AVERAGE
3899	390	10.00%
5420	488	9.00%
4950	171	3.45%
5201	123	2.36%
5484	171	3.12%
5661	248	4.38%
4953	150	3.03%
4034	178	4.41%
39602	1919	4.85%

FLIGHT PLAN STATISTICS

PANAMA





FLIGHT PLAN STATISTICS

ECUADOR	
Tipo de error	Total
INCONSISTENT ITEM 10 AND 18 PBN/	27
INVALID COMNAV EQUIP	8
DUPLICATE FPL STORED	7
FILL REG/ IN FIELD 18 ONLY IF DIFFERENT FROM THE AIRCRAFT IDENTIFICATION IN ITEM 7. DOC 4444	7
AIRCRAFT TYPE NOT FOUND IN DATABASE	4
NON RVSM STATUS	4
INCONSISTENT ITEM 10 AND 18 R WITH NO PBN/	4
WRONG NUMBER OF FIELDS	3
INCONSISTENT ITEM 10 AND 18 Z WITH NO DAT/ OR COM/ OR NAV/	3
INVALID SEL/ REPEATED LETTERS	2



FLIGHT PLAN STATISTICS

Colombia	
Tipo de error	Total
DUPLICATE FPL STORED	381
INCONSISTENT ITEM 10 AND 18 PBN/	10
WRONG NUMBER OF FIELDS	8
INVALID FIELD 18 SYNTAX	3
INVALID CODE/ FORMAT	2
INVALID SPEED OR LEVEL	1



FLIGHT PLAN STATISTICS

SB - Brazil	
Tipo de error	Total
DUPLICATE FPL STORED	28
WRONG NUMBER OF FIELDS	14
AIRCRAFT TYPE NOT FOUND IN DATABASE	1
INVALID CODE/ FORMAT	1
FILL REG/ IN FIELD 18 ONLY IF DIFFERENT FROM THE AIRCRAFT IDENTIFICATION IN ITEM 7. DOC 4444	1



FLIGHT PLAN STATISTICS

SC - Chile	
ERROR	Total
DUPLICATE FPL STORED	13
WRONG NUMBER OF FIELDS	2
NON RVSM STATUS	1
INVALID SPEED OR LEVEL	1



FLIGHT PLAN STATISTICS

SP - Perú	
ERROR	Total
INCONSISTENT ITEM 10 AND 18 PBN/	32
INVALID SEL/ REPEATED LETTERS	10
NON RVSM STATUS	4
INVALID SEL/ SECOND PAIR OF LETTERS NOT IN ALPHABETICAL ORDER	4
AIRCRAFT TYPE NOT FOUND IN DATABASE	3
WRONG NUMBER OF FIELDS	2
INVALID SEL/ SYNTAX	1
INVALID AIRCRAFT NUMBER	1
INVALID SEL/ ELEMENT	1

FLIGHT PLAN STATISTICS

SA - Argentina	
Tipo de error	Total
INVALID CODE/ FORMAT	3
INCONSISTENT ITEM 10 AND 18 PBN/	2
INVALID FIELD 18 SYNTAX	2
INVALID PER/ VALUE	2
INCONSISTENT PBN/ VALUE	2
INVALID FIELD 16 SYNTAX	2
WRONG NUMBER OF FIELDS	1
INVALID DOF/ SYNTAX	1
INVALID SPEED OR LEVEL	1
DUPLICATE FPL STORED	1
INVALID COMNAV EQUIP	1

SOUTH AMERICA

TOP 10 FLIGHT PLAN ERRORS

Error	Total	
-- DUPLICATE FPL STORED	895	74.52%
-- INCONSISTENT ITEM 10 AND 18 PBN/	110	9.15%
-- DIFFERENT FLIGHT PLAN STORED	47	3.91%
-- WRONG NUMBER OF FIELDS	45	3.74%
-- FILL REG/ IN FIELD 18 ONLY IF DIFFERENT -- FROM THE AIRCRAFT IDENTIFICATION IN ITEM 7	27	2.26%
-- NO FPL STORED	18	1.50%
-- INVALID SEL/REPEATED LETTERS	17	1.41%
-- NON RVSM STATUS	14	1.17%
-- INVALID COM NAV EQIP	14	1.17%
-- INCONSISTENT ITEM 10 AND 18 R WITH NO PBN	14	1.17%

PLANES DE VUELO DE SPIM

FF MHCCZQZX
251830 SPIMZQZA
(FPL-LPE2454-IS
-A319/M-SWYDE1E2FGHIR/E
-SPJC1855
-N0453F380 ISREN1F UM542 ARNEL DCT ATENO UL203
LIXAS UZ512
TALAG/N0449F390 UA754 BTO UB881 CZM UA766
VOBED DCT VITAR DCT CUN DCT
-MMUN0459 MMMD
-PBN/A1B1D1S1S2T1T2 DOF/180325 REG/CCBCF
EET/SEFG0122 MHTG0202
MMID0429S)

FF MHCCZQZX
282051 SPIMZQZA
(FPL-LAN9954-IX
-A320/M-SWYDE1E2FGHIR/S
-SPJC2150
-N0446F380 ISREN1F ISREN UL780 EVRED UL780 GYV
UM659 PARRI PARRI4
-MROC0337 MPTO
-PBN/A1B1D1S2T1 DOF/180128 REG/CCCQO
EET/SEFG0117 SKED0209 MPZL02367
MHTG0249 SEL/ALBE PER/C RMK/TCAS EQPD)
HORA DEL EET NO ES VALIDO.

PLANES DE VUELO DE SCEL

FF MHCCZQZX
252339 SCELZPZX
(FPL-AAL940-IS
-B788/H-SDE1E3GHIJ1J4J5M1RWXYZ/B1D1L
-SCEL0030
-M082F360 DONT1A DONTI UT131 ATEDA UL302
ILMAR UM542 TOPIX/N0489F380
UM542 ATENO UL203 LIXAS UZ512
SELAK/N0485F400 UZ512 BZE UB753 MID
UL208 DUTNA L208 PEGLG DCT MUSYL L207 VUH
DCT CRIED WHINY4
-KDFW0914 KIAH
-PBN/A1B1C1D1L1O1S2T1 NAV/RNVD1E2A1
DAT/1FANSP2PDC SUR/260B DOF/
180326 REG/N816AA EET/SCFZ0045 SPIM0159
SEFG0357 **MHCC0433** MMID0647
KZHU0740 SEL/DRBP **CODE/AB1FA7 STAGE 3**)

**STAGE 3 NO PERTENECE AL ELEMENTO CODE, LA FIR
MHCC NO EXISTE.**

FF MHCCZQZX
292317 SCELZPZX
(FPL-AMX011-IS
-B788/H-**SDE3GHJ4J5M1P2RWXYZ/LB1D1**
-SCEL0430
-N0495F360 VTN1 VTN UL401 ILVOS/N0495F380
UL401 POGAM/N0488F400
UL344 ACA UJ21W KANOX/N0491F390 UJ21W TEQ
J21 MEX MEX3B
-MMM0736 MMGL
-PBN/A1B1C1D1L1S1S2 DAT/1FANS SUR/RSP180
DOF/180330 REG/N966AM
EET/SCFZ0047 SPIM0205 SEFG0411 MHTG0450
MMID0624 MMEX0631 SEL/JKEP
CODE/AD727C OPR/AMX RALT/SCFA SEGU MROC)

EN CAMPO 10 A FALTA LA LETRA I.

PLANES DE VUELO DE SBGR

FF MHCCZQZX
020118 SBGRYOYX
(FPL-AMX017-IS **10A FALTA LETRA I**
-B788/H-SDE3GHJ4J5M1P2RWXYZ/LB1D1
-SBGR0235
-N0507F340 CGO1F SCB UM415 EGEVA/N0498F360
UM415 EVNES UM782
ISEBU/N0493F380 UM782 MTU UM549 TBG UA317
DUPES/N0489F400 UA317 TAP
J13 IZT UL423 TEQ J21 MEX MEX3B
-MMM0852 MMQT
-PBN/A1B1C1D1L1S2 DAT/1FANS SUR/RSP180
DOF/180402 REG/N967AM
EET/SBAZ0124 SKED0417 MPZL0532 MHTG0612
MMID0734 MMEX0806 SEL/JKLP
CODE/AD7633 OPR/AMX ORGN/MMMXAMXO
RALT/SLVR SKBO)

FF MHCCZQZX MHCCZFZX
120939 SBGRYOYX
(FPL-AMX015-IS
-B789/H-SDE3GHJ4J5M1P2RWXYZ/LB2D1
-SBGR1230
-N0495F360 CGO1F SCB UM415 EVNES UM782 PULBI UL655
ANRIR UM775 RCO
UN420 VERDE/N0491F380 UN420 IQT UM776 QIT UL318
ALSAL/N0487F400
UL318 IPSUM/N0495F380 UL318 PBC UJ5 MEX MEX5A
-MMM0812 MMAA
-PBN/A1B1C1D1L1S2 DAT/1FANS SUR/RSP180 DOF/180412
REG/XAADC
EET/SBAZ0110 SLLF0235 SBAZ0249 SPIM0343 SEFG0415
SKED0453 MHTG0523 MMID0701 MMEX0731 SEL/FRAQ
CODE/0D09E5 ORGN/MMMXAMXO RALT/SLVR **SEGU**

**-E/0940 P/TBN R/UEVE S/M J/LF D/8 A/WHITE C/LUIS
SANCHEZ 200000308) La casilla 19 no debe ser incluida en un
FPL**

PLANES DE VUELO DE MPTO

FF MHCCZQZX

071744 MPZLZQZX

(FPL-AMX015/A3713-IS

-B789/H-SWYDE3GHIJ4J5M1P2RXZ/LB2D1

-SBGR1125

-N0506F340 DCT EDRAN UM549 DAKMO UM549

TBG UA317 RUTA INCOMPLETA

-MMM0829 MMGL

-PBN/A1B1C1D1L1S2 DAT/1FAN SUR/RSP180

DOF/180407 REG/XAADD

SEL/FRBP CODE/0D09EC ORGN/MMMXAMXO

RALT/SBEG MPTO)

FF MHCCZQZX

011035 MPTOZPZX

(FPL-CMP144-IS

-B738/M-SDE1E2E-MPTO1353 casilla en posición incorrecta

-N0440F320 SIMAN1A SIMAN DCT PUDOS DCT ISEBA TARCO1

-MROC0057 MRLB

-PBN/A1B1C1D1T1S2 DOF/180101 REG/HP1536

EET/MHTG0034 SEL/AFMQ OPR/CMP

PER/C RMK/TCAS) No hay relación entre PBN Y casilla 10A

CASO COMPARATIVO

FF MHCCZQZX
022207 SAEZZXTT
(FPL-AAL996-IS
-B772/H-SDE1E2E3FGHJ4J5M1RWXY/B1D1L
-SAEZ2300
-N0488F320 ATOVO2A ATOVO UW5 ROS UT653 JUA
UB560 TOY UL302 ILMAR/N0486F360 UM542
ARNEL/N0475F400 UM542 ATENO UL203 LIXAS
UZ512 LIB UZ512 MGA UZ512 BZE UB753 MID UL208
DUTNA L208 PEGLG DCT MUSYL L207 VUH DCT CRIED
BEREE1
-KDFW1035 KAUS
-PBN/A1B1C1D1L1O1S2T1 NAV/RNVD1E2A1
DAT/1FANS P2DC SUR/RSP180 260B
REG/N758AN EET/SAEZ0005 SACF0041
SAMF0110 SCEZ0134 SC??? SPIM0315
SEFG0517 MHCC0556 MMID0814
KZHU0905 SEL/GKDJ PER/D)

FF MHCCZQZX
030412 SEFGZQZX
(FPL-AAL996/A0436-IS
-B772/H-SWYDE1E2E3FGHRXZ/B1D1L
-SAEZ2300
-N0488F320 TAL ARNEL/N0475F340 ATENO DCT LIXAS
RADIM UZ512 LIB UZ512 MGA UZ512 BZE UB753 MID
UL208 DUTNA L208 PEGLG DCT MUSYL L207 VUH DCT
CRIED BEREE1
-KDFW1055 KAUS
-PBN/A1B1C1D1L1O1S2T1 NAV/RNVD1E2A1
DAT/1FAN SUR/RSP180 260B DOF/180402
REG/N758AN EET/SEFG0517 SEL/GKDJ PER/D)

CASO COMPARATIVO

FF MHCCZQZX

050501 SPIMZQZA

(FPL-AAL988-IS

-B752/M-DE1E3FGHJ4J5M1RSWXYZ/HD1

-SPJC0555

-N0470F360 ISREN1G UM542 ATENO

-KDFW0653 KIAH

-PBN/A1B1C1D1L1O1S2T1 NAV/RNVD1E2A1

DAT/1FAN SUR/RSP180 DOF/180305

REG/N177AN EET/SEFG0120 MHCC0159

MMID0420 KZHU0513 SEL/HKBL)

FF MHCCZQZX

050743 SEFGZQZX

(FPL-AAL988/A5664-IS

-B752/M-SWYDE1E3FGHJ4J5IM1RXZD1H

-SPJC0555

-N0470F360 TAL ARNEL/N0470F360 ATENO DCT LIXAS

RADIM LIB UZ512 MGA UZ512 TALAG/N046F380 UZ512 BZE

UB753 MID UL208 DUTNA/N0454F400 L208 ANKRR DCT

VUH DCT CRIED BEREE1

-KDFW0718 KIAH

-PBN/A1B1C1D1L1O1S2T1 NAV/RNVD1E2A1 DAT/1FAN

SUR/RSP180 DOF/180305 REG/N177AN EET/SEFG0120

SEL/HKBL)

FLIGHT PLAN ERROR SOLUTION

PLAN

STRATEGY

EFFORT



THANK YOU!