

Implementing the Changes in Aircraft Types as defined in *ICAO Document 8643 Aircraft Designators*

Presented to: NACC AIM - AIDC – FPL
Monitoring Group

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Requirements and
Validations

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Federal Aviation
Administration



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Administration

Agenda

- **Background**
- **Aircraft type designator maintenance**
- **ICAO aircraft type designators/change procedure**
- **Synchronizing update/work around**



Background

- **2016 - ICAO provides standard aircraft type designators**
- **Historically, ICAO published a paper version of Doc 8643 – Aircraft Type Designators and updated its website once per year (March/April)**
<http://www.icao.int/publications/DOC8643/Pages/Search.aspx>
- **Aircraft operators potentially could file a new designator immediately upon ICAO’s publication, in accordance with Doc 4444 PANS-ATM**
- **Air navigation service provider (ANSP) automation systems not immediately ready for new aircraft types on ICAO’s publication date**
 - No “add/delete” list from ICAO
 - No coordinated implementation date for ANSPs or operators
 - ANSP analysis and integration of new aircraft types
 - Coordination with adjacent ANSPs



ICAO Publication Change

- 2017 - No change for paper publication of Doc 8643
- Effective 2 February 2017, Doc 8643 website began being updated on 28-day Aeronautical Information Regulation and Control (AIRAC) cycle, if aircraft types are being added or deleted
- Since 2 February, 30+ aircraft type designators have been added and deleted in the FAA database
- **FAA:**
 - Evaluating aircraft impact, wake turbulence, LAHSO, etc.
 - Coordinating with adjacent ANSPs
 - Performing automation system updates
 - Preparing publication of FAA Order 7360.1, Aircraft Type Designators
- **Began FAA aircraft type changes in system updates 22 June 2017**



ICAO Document 8643 Changes

- ICAO began updating the web-based version of Document 8643, Aircraft Type Designators, (source for aircraft types) every 28 days.
- In 2016 the update was accomplished annually; then in 2017 monthly
 - ICAO provides a rudimentary description (i.e., Type, Engine, Engine Number, and Wake Turbulence Category) for each new aircraft type,
 - **FAA weight classes and FAA wake categories** are needed for Automated Terminal Proximity Alert (ATPA), **as well as all other aircraft performance specifications, e.g., speed, rate of climb/descent, etc., needed by various automation systems.**
- The FAA is working to update its systems with type additions and deletions every 56 days
- Using 56 days periods for Aircraft designators. FAA can match to AIRAC programmed dates



Updating Aircraft Types

2017 AIRAC Dates

05 JAN 17

02 FEB 17

02 MAR 17

30 MAR 17

27 APR 17

25 MAY 17

22 JUN 17 ✓

20 JUL 17

17 AUG 17 ✓

14 SEP 17

12 OCT 17

09 NOV 17

07 DEC 17

- **Dissemination of aircraft type changes are being coordinated with interface partners Nav Canada, SENEAM and Cuba IACC via existing recurring telecons and email**
- **Coordination with flight plan filers is accomplished with an existing monthly Flight Plan Filers telecon**



Embraer 190/195 Update Example

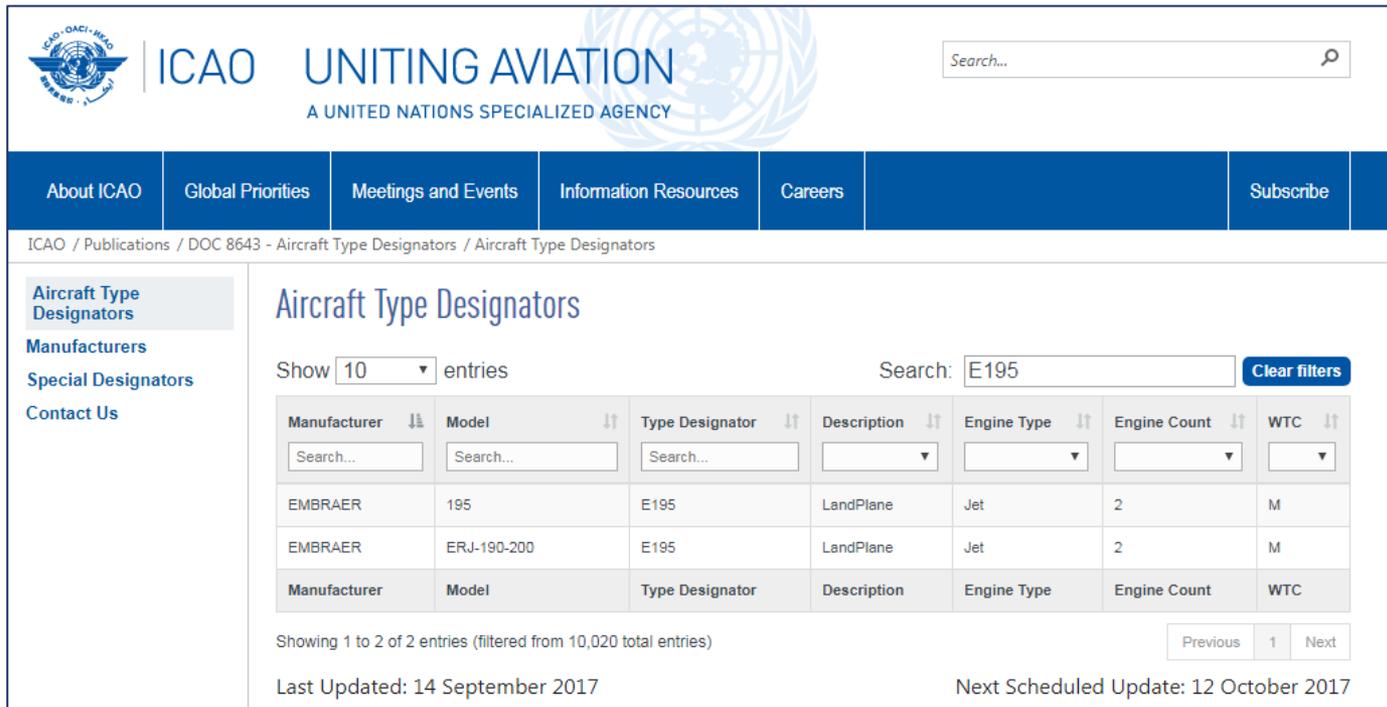
- **EMBRAER models ERJ-190-100 and ERJ-190-200**
 - Until 2 March, designator for both models was “E190”
 - After 2 March, ICAO assigned separate designator to
 - ERJ-190-100 (190) – type designator “E190”
 - ERJ-190-200 (195) – type designator “E195”
- **FAA evaluated aircraft and coordinated with adjacent ANSPs to make available for use (filing)**
- **FAA systems (En Route, Terminal and Oceanic) updated to accept “E195” 8/17/2017**
- **Populating ZZZZ in FPL field 9b and TYPE/E195 in field 18 of a filed flight plan can serve as a work around prior to update if required**



ICAO Document 8643 Aircraft Designators

- The EMBRAER ERJ 190-200 new aircraft type is published online as E195 and can be seen listed below. Note the 'Last Updated' and 'Next Scheduled Update' dates are listed in the example below

<https://www.icao.int/publications/DOC8643/Pages/Search.aspx>



ICAO / Publications / DOC 8643 - Aircraft Type Designators / Aircraft Type Designators

Aircraft Type Designators

Show 10 entries Search: E195 Clear filters

Manufacturer	Model	Type Designator	Description	Engine Type	Engine Count	WTC
EMBRAER	195	E195	LandPlane	Jet	2	M
EMBRAER	ERJ-190-200	E195	LandPlane	Jet	2	M

Showing 1 to 2 of 2 entries (filtered from 10,020 total entries)

Last Updated: 14 September 2017 Next Scheduled Update: 12 October 2017



List of Aircraft Added 8/17/2017

MANUFACTURER	Model	Type Designator	Type	Engine	Engine Number	ICAO Wake Turbulence Category
Added						
AEROPRAKT	A-32 Vixxen	AP32	LandPlane	Turboprop	1	Light
AIRBUS	E-Fan	EFAN	LandPlane	Electric	2	Light
ANTONOV	An-178	A178	LandPlane	Jet	2	Medium
BELL	505 Jet Ranger X	B505	Helicopter	Turboshaft	1	Light
BOEING	BTX-1	BTX1	LandPlane	Jet	1	Light
CESSNA	700 Citation Longitude	C700	LandPlane	Jet	2	Medium
CESSNA; TEXTRON AIRLAND	E530 Scorpion	E530	LandPlane	Jet	2	Medium
CHENGDU	J-20	J20	LandPlane	Jet	2	Medium
CUB CRAFTERS	CC-19 XCub	CC19	LandPlane	Piston	1	Light
DIAMOND	Dart-450	DT45	LandPlane	Turboprop	1	Light
EMBRAER	195, ERJ-190-200	E195	LandPlane	Jet	2	Medium
EMBRAER	KC-390	KC39	LandPlane	Jet	2	Medium
FMA, PETROLINI	20, IAe-20 El Boyero	EBOY	LandPlane	Piston	1	Light
LANCAIR	Lancair ES-P	LESP	LandPlane	Piston	1	Light
MOONEY	M-10T	M10F	LandPlane	Piston	1	Light
MOONEY	M-10J	M10R	LandPlane	Piston	1	Light
P&M AVIATION	HypR	HYPR	LandPlane	Piston	1	Light
P&M AVIATION	PulsR	PULR	LandPlane	Piston	1	Light
PIPER	PA-46-600TP, M600	M600	LandPlane	Turboprop	1	Light
RAINBOW; SKYREACH	BushCat	BUSH	LandPlane	Piston	1	Light
RANS	S-20 Raven	RS20	LandPlane	Piston	1	Light
REINER STEMME	Q-01	Q01	LandPlane	Piston	1	Light
TAI	Hürkuş	HURK	LandPlane	Turboprop	1	Light



List of Aircraft Being Added 12/07/2017

Manufacturer	Model Name	Type Designator	Description	Engine type	Engine Count	Wake Turbulence Category
AIRBUS	A-319neo	A19N	LandPlane	Jet	2	Medium
AIRBUS	A-320neo	A20N	LandPlane	Jet	2	Medium
AIRBUS	A-321neo	A21N	LandPlane	Jet	2	Medium
AIRBUS	A-330-900	A339	LandPlane	Jet	2	Heavy
BOEING	BBJ (737 MAX 7)	B37M	LandPlane	Jet	2	Medium
	737 MAX 7					
	737 MAX 7 BBJ					
BOEING	BBJ (737 MAX 8)	B38M	LandPlane	Jet	2	Medium
	737 MAX 8					
	737 MAX 8 BBJ					
BOEING	BBJ (737 MAX 9)	B39M	LandPlane	Jet	2	Medium
	737 MAX 9					
	737 MAX 9 BBJ					
PROGRESS TECHNOAVIA	Rysachok	RYSA	LandPlane	Turboprop	2	Light
SIKORSKY	S-97 Raider	S97	Helicopter	Turboshaft	1	Light
SILENCE	Twister	TWST	LandPlane	Piston	1	Light



List of Aircraft Deleted 8/17/2017

MANUFACTURER	Model	Type Designator	Type	Engine	Engine Number	ICAO Wake Turbulence Category
Deleted						
AIRBUS	A-350-800 XWB Prestige	A358				
SPITFIRE	Mark 1	SPT1				
BAC; VICKERS	VC-10	VC10				
VICKERS	Viscount	VISC				

- **Note: A query for any of the above listed aircraft types online will yield 'No Records Found'**

The screenshot shows the ICAO website interface for Aircraft Type Designators. The search bar contains 'VISC' and the results section displays 'No matching records found'. The page includes navigation links, a search filter, and pagination controls.

ICAO / Publications / DOC 8643 - Aircraft Type Designators / Aircraft Type Designators

Aircraft Type Designators

Show 10 entries Search: VISC Clear filters

Manufacturer	Model	Type Designator	Description	Engine Type	Engine Count	WTC
No matching records found						
Manufacturer	Model	Type Designator	Description	Engine Type	Engine Count	WTC

Showing 0 to 0 of 0 entries (filtered from 10,020 total entries) Previous Next

Last Updated: 14 September 2017 Next Scheduled Update: 12 October 2017



Automation Impacts of disparate aircraft types

- **Adjacent interfaced ANSPs must be aware that :**
 - Many Interfaces include Aircraft Types error checks
 - **General** - US does not check inbound CPLs. Checks filed FPLs for AC type validity
 - **US – Canada Interface:** Canada checks but does not reject AC type, referred to ATOS (flight data position)
 - **US – Mexico Interface:** Mexico checks filed FPLs and CPLs received for AC type validity
 - **US – Cuba Interface:** Cuba checks filed FPLs and CPLs received for AC type validity



Recommendation

- **The meeting is invited to:**
 - Utilize the current Aircraft Type information changes identified in this briefing
 - Be aware of the online changes are published monthly
 - Gather the necessary related system information required
 - Coordinate operational/technical change requirements
 - Formulate the information update strategies to support the changing data for accurate and timely processing



Concerns, comments, or questions

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