

Title 14 CFR Part 129 OpSpec C091 Information

Last update: 07/13/2020. Issued Notice N 8900.550 on 6/3/2020.

12/6/2017. All recommendations and corrections need to be submitted to either the International FAA or Industry Chair of the Part 129 OSWG. For directory listing current chairs go to the most recent OSWG meeting agenda. All meeting agendas start with the year and can be found at the following link:

<http://fsims.avs.faa.gov/fsims/fsims.nsf/pubdisplay?openform&type=OSWG&status=active&count=-1>

12/6/2017 Change: Updated Airports Safety and Standards point of contact. Replaced “headquarters” with “Washington, DC” since under the Flight Standards reorganization “headquarters” is a term no longer used.

4/9/2017 Change: Added directions for where to send in recommendations and corrections.

3/24/2017 Update: Added Q & A reference:

- PCN to include link with airport data information.
- ADG and RFFS.

2/13/2017 Update: Added industry (Boeing) POCs and a link to the Boeing’s 747-8 airport compatibility link.

Operations specifications C091 authorizes takeoff and landing operations of airplane design group VI (ADG VI), (ICAO Group F) at U.S. airports. Currently within the OpSpec there are three boilerplate text limitations as follows:

- A380,
- B747-8,
- A380 and B747-8.

The FAA is working with Boeing on certifying two more ADG VI aircraft in 2018 (B777-9 and B777-8). AFS is planning to amend OpSpec C091 for the new aircraft. Foreign Operators who expect to want to operate either of the two aircraft to the U.S. should contact the responsible POI.

<p>In order for OpSpec C091 to be issued, the following questions should be answered. See the note under the last question for further details.</p>	
<p>1. Does the operator have State of the Operator approval for the aircraft (e.g., A380, B747-8) operation to the U.S. airport(s) requested?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>2. Does the operator have documentation that the airport(s) is/are suitable? For U.S. destination airports, need Modifications of Standards (MoS) approval (for the portion of the airfield dedicated to ADG VI (Code F) airplanes) for that make and model (e.g., A380 or B747-8). For alternate airports, the process the foreign operator used to evaluate the airport to ensure it could accommodate the aircraft. A list of airports with MoSs for the A380 and B747-8 is located at http://www.faa.gov/airports/engineering/nla_mos/.</p> <p>It is the foreign air carrier’s responsibility to confirm that they can comply with the requirements of OpSpec C091 and to supply the POI sufficient documentation to verify their compliance. The air carrier is responsible for any necessary coordination and letters of understanding with applicable air traffic control (ATC) facilities and the airport operators to meet the requirements of OpSpec C091.</p> <p>For scheduled destination runway, taxi routes, and gate locations to be used and procedures to follow applicable to the specific foreign air carrier shall be established in a written Taxi Operational Plan approved by the airport operator, ATC, and local control.</p> <p>An operator will need to know what the Pavement Classification Number (PCN) is for any pavement that the aircraft will operate on, and PCN must be greater than Aircraft Classification Number (can). If ACN is greater than PCN, allowance for the overload needs to be accepted by the airport authority since pre-approval cannot be assumed. (See AC 150/5335-5C Standardized Method of Reporting Pavement Strength for detailed information regarding ACN/PCN and evaluation of overloads). A copy is available at https://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/documentNumber/150_5335-5.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>

In addition to evaluating pavement strength also evaluate strength of any structures that must be crossed by the aircraft, e.g., taxiway or runway bridges and culverts. If an alternate airport is not served by another operator using that ADG-VI/ICAO F aircraft (i.e., B747-8, A380) as a scheduled destination then the airport does not have a requirement that a written Taxi Operational Plan approved by the airport operator, ATC and local control be developed therefore it is up to the operator to conduct the analysis. The operator must know the:

- Clearances needed to ensure the aircraft does not hit anything while moving on the airport surface from landing to taxi to a gate/parking and from push/parking to taxi to runway.
- Which taxiways routes it can accept when cleared by ground control.
- Which taxiway-fillets and straight sections are wide enough to accept for taxi.

See AC 150/5300-13A to assist with planning. The AC may be found at the following link:

https://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/documentNumber/150_5300-13.

Additionally, part of the determination as to suitability of an airport are the following items (not an exclusive list): availability of suitable jetway or stairs to disembark and load passengers, suitable fueling equipment, trained ground handling personnel, suitable equipment to get bags and cargo on and off, deicing, crash-fire rescue.

NOTE: PIs may find copies of written air traffic Letters of Agreement (LOAs) and Standard Operating Procedures (SOPs) for ground movement operations of ADG-VI/ICAO group F aircraft (i.e., A380 or B747-8) at U.S. airports at the following (internal) FAA website:

<https://loa.faa.gov/browse/browse.cfm>.

For KCVG type in cvg in quick browse window, click on enter and select Covington (Cincinnati) (ATCT). Operators need to contact the airport and obtain a copy of the taxi plan from the airport. Some airports have a different taxi plan based on operator or type of operation (alternate vs scheduled destination).

3. Is the aircraft (i.e., A380 or B747-8) already listed in C067 for that U.S. airport?	Yes <input type="checkbox"/> No <input type="checkbox"/>
4. If the operator is requesting to start scheduled service in a new AGD-VI aircraft, does the operator have sufficient number of suitable alternates for that new destination?	Yes <input type="checkbox"/> No <input type="checkbox"/> Not <input type="checkbox"/> Applicable <input type="checkbox"/>
5. Is the operator requesting to operate an ADG –VI aircraft for which there is boilerplate selectable text in C091?	Yes <input type="checkbox"/> No <input type="checkbox"/>
6. Are there any limitations set out by the State of the Operator or airports or in the airport remarks section of the Chart supplement (formerly Airport/Facility Directory) for the airport? Operators may find Chart supplements for U.S. airports at the following link: https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dafd/search/ .	Yes <input type="checkbox"/> No <input type="checkbox"/>
Note: You must answer: -“Yes” to questions 1, 2. -“Yes” or “No” to question 3. Unless there exists a special provision or limitation (e.g., taxi restriction imposed by the State of the Operator), PI(s) do not need to list airports used by foreign air carriers operating Airplane Design Group VI (ADG-VI)/ICAO Group F aircraft (e.g., A380, B747-8, or AN-124) into a U.S. airport if the airport has a Modification of Standard (MoS) for that aircraft.	

FAA Washington, DC Contacts

Division	Name	E-mail & Telephone	Notes
Flight Standards	Danuta Pronczuk	Danuta.Pronczuk@faa.gov 202-267-0923	202-267-0962
Airport Safety and Standards	Steven Debban	Steven.Debban@faa.gov 202-267-8664	
	Gregory D. Cline, P.E. (Sr. Pavements Civil Engineer)	Gregory.Cline@faa.gov 202-267-8814	

Industry Contacts

Organization	Name	E-mail & Telephone	Notes
Boeing	Evanicios Costa	evanicio.c.costa@boeing.com 562-797-0525	Evanicios Costa is the B747-8 focal. www.boeing.com/airports is a link which contains a 747-8 Airport Compatibility link.
	Karen S. Dix-Colony	karen.s.dix-colony@boeing.com 562-797-0602	Karen is both the B777-8 and the B777-9 focal.

Questions (Q) and Answers (A)

Q: If the airport already has a Taxi Ops Plan say for A380 foreign carrier, will it apply to “another” 2nd A380 foreign carrier using the airport?

A: Answer is basically yes. However, the 2nd carrier likely will use different gate(s)/hard stand locations which will require possibly new taxi routes near the terminal. Thus the Taxi Ops Plan is a “living” Plan that will change, updated. Usually the same runway usage and main taxi routes beyond the terminal/cargo areas that were approved for the 1st carrier would remain the same for both the 1st and 2nd carrier. If the 2nd carrier uses a B747-8 not an A380 then you NEED a different Taxi Ops Plan for this operator. Taxi Ops Plan for A380 are not valid in general for B747-8.

Q. KBOS has one common taxi ops plan for the B747-8 and A380. Is that OK?

A. Yes. Regarding KBOS who has just 1 common Taxi OPS Plan, this is ok. The Airport has flexibility to combine the 2 aircraft (B747-8 and A380) into a single doc. If you read thru it you will see “specific” operational requirements and restrictions placed according to the A380 and to the B747-8. That is, each airplane was addressed “specifically” in the Plan.

Q: Some MoSs have taxi speed restrictions for particular taxi routes or a portion of a taxi route. Will the Taxi Ops Plan list/identify those locations and speeds?

A: The first place that a speed restriction “appears” is in the FAA-approved MoS. From here the airport operator and air traffic control tower (ATCT) manager (Mgr) should transfer the “condition” into the Taxi Ops Plan. This is the process that is to be followed. To ensure itself, the foreign carrier can look at all the MoSs to see if the MoS has a speed restriction and its location. The carrier should also look for any wingspan restriction placed on certain taxiway routes or portion of them. For example, you can taxi an A380 on taxiway A (Twy A) but the parallel Twy B is restricted to allow only narrow-bodied airlines under 118 feet. Again this should be in the Plan.

Q: Is the FAA Airports web site that list USA airports with approved MoSs for A380 and for B747-8 up to date?

A: It should be. If you see one missing then need to let airport safety and standards know so they can update the website information. A new airport coming on line soon is Portland Intl Oregon for B747-8.

Q: Where can operators obtain PCN and runway and taxiway information for U.S. airports?

A: Reporting changes to airport data is generally published on Federal Aviation Administration (FAA) Form 5010, Airport Master Record. The 5010 data is updated every 56 days, but the information could be older depending on how long ago the sponsor (airport) provided the information.

For Example: To locate the FAA Forms 5010 for Boston Logan Airport go to:
www.faa.gov/airports, [airport safety](http://www.faa.gov/airports/airport_safety). Once on the following link
http://www.faa.gov/airports/airport_safety/airportdata_5010/:

Select: FAA Forms 5010, Airport Master Record, which will bring you to:
<http://www.gcr1.com/5010WEB/>. Type in BOS for airport. This will bring you to:

<http://www.gcr1.com/5010WEB/airport.cfm?Site=BOS&CFID=2002562&CFTOKEN=50442455>. Once there select *runway info* which will give you the PCN.

[<http://www.gcr1.com/5010WEB/airport.cfm?Site=BOS&AptSecNum=3>].

Q: Is the FAA Forms 5010 information reliable? The AC used the word “generally.”

A: Yes, the published data on FAA Forms 5010 should be considered reliable. If it gets as far as getting reported on the 5010, any inconsistencies that may occur when determining PCN would be resolved. These values are valid unless the overall use (aircraft type/size) significantly changes – at which time the airport is to determine a new PCN. Determination of PCN relies on anticipated traffic of all type aircraft for 10-20 years as well as the pavement structure, etc. [Although not specifically indicated, it is recommended to check the PCN at least every ten years. The FAA anticipates the next time the FAA updates the advisory circular (AC 150/5335-5C), the FAA may recommend checking for validity each time a PCI survey is completed. Numbers are valid if reported and typically will stay consistent (unless traffic changes or overloads are common)]

Note that on very small runways/airports that report PCN (generally <12,500 lb aircraft use), PCN is not really valid and as the advisory circular indicates, PCNs are not to be reported on those – you will see many still try to provide a number and they range all over the place.

FYI: In AC 150/5335-5C you will see the use of “generally,” “typically,” etc. when discussing this topic – one should understand these are numbers generated on anticipated traffic of the future and even considering this or not, PCN is not an “exact” or “specific” number. If you are using for planning purposes, PCN should only be used cautiously. PCN is for the use of airport operations and was not developed to be used for design, planning, etc. It is a very good tool to be used for pavement management and airport planning, but as a tool, not a decision maker. Only airport operators should use PCNs as a decision maker.

For additional questions, contact the FAA Airport Safety and Standards Sr. Pavements Civil Engineer listed in the table above.

Q: Is there a legend for how to read the FAA Form 5010?

A: Best bet for now is to utilize the breakdown in the following AC:

https://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/documentNumber/150_5200-35.

Q: How is ADG determined?

A: ADG is determined only by max of either wingspan or tail height usually the wingspan determines the ADG. See AC 150/5300-13A Definitions reads:

Airplane Design Group (ADG). A classification of aircraft based on wingspan and tail height. When the aircraft wingspan and tail height fall in different groups, the higher group is used.

Table 1-2. Airplane Design Group (ADG)

Group #	Tail Height (ft [m])	Wingspan (ft [m])
I	< 20' (< 6 m)	< 49' (< 15 m)
II	20' - < 30' (6 m - < 9 m)	49' - < 79' (15 m - < 24 m)
III	30' - < 45' (9 m - < 13.5 m)	79' - < 118' (24 m - < 36 m)
IV	45' - < 60' (13.5 m - < 18.5 m)	118' - < 171' (36 m - < 52 m)
V	60' - < 66' (18.5 m - < 20 m)	171' - < 214' (52 m - < 65 m)
VI	66' - < 80' (20 m - < 24.5 m)	214' - < 262' (65 m - < 80 m)

Q: Is ADG and ARFF based on the same parameters?

A: No.

Q: Does the FAA and ICAO use the same parameters for ARFF?

A: No. The FAA only does the length and does not include the width. FAA Index E would include both: ICAO Cat 9 & 10. The table below is a comparison between ICAO category and the US Index. It can be found in NFPA 403: Standard for Aircraft Rescue and Fire-Fighting Services at Airports, 2014 Edition.

Table 4.3.1 Airport Category by Overall Length and Width of Aircraft

Airport Category U.S.			Overall Length of Aircraft up to but Not Including		Maximum Exterior Width up to but Not Including	
NFPA	FAA	ICAO	ft	m	ft	m
1	A*	1	30	9	6.6	2
2	A*	2	39	12	6.6	2
3	A*	3	59	18	9.8	3
4	A	4	78	24	13.0	4
5	A	5	90	28	13.0	4
6	B	6	126	39	16.4	5
7	C	7	160	49	16.4	5
8	D	8	200	61	23.0	7
9	E	9	250	76	23.0	7
10	E	10	295	90	25.0	8

Notes:

(1) Airport categories are used in the calculations to eliminate the need for calculating specific quantities of extinguishing agents for each type of aircraft.

(2) Although only water is normally necessary for interior handline attack, logistically and tactically it should be discharged as foam and is therefore included in the quantities of water necessary for foam production in Table 5.3.1(a) and Table 5.3.1(b).

* It is FAA Category A if the airport has scheduled service with aircraft that have more than nine passenger seats.