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New Regulatory Framework for the Use of Remotely Piloted Aircraft Systems in Mexico.

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Pronunciation: 'che-l&m, is Latin for airspace or sky. The Romans began questioning the rights they had in the space above the land they owned and to how high above did that right extended to. Ad coelum et ad inferos, they discussed, meaning that their right of property would extend as high up to the heavens and down to hell.



New Regulatory Framework for the Use of Remotely Piloted Aircraft Systems in Mexico.

by Juan Manuel Estrada

he present article addresses the new legal dispositions for the use of "drones" in Mexico (a term commonly used in a military context) pursuant to our April 2015 *Terrum* publication titled **"Limitless possibilities for UAV"**, in which we analyzed both the benefits and possibilities regarding the usage of Unmanned Aerial Vehicles (UAV), along with the general scope of our national regulatory framework.

As addressed in our past publication, the regulation for the use of a UAV is found in *Circular Oblogatoria* AV-23/10, which was issued on July 19, 2010, and furtherly revised in 2013¹ by our Civil Aviation Authority. Said *Circular Oblogatoria* sums up the efforts of our aviation authority to regulate and set forth a legal framework for a new and obscure area of the civil aviation industry within our country.

In that sense and in terms of both the international and local experience gained in the last couple of years by our aviation authority, on April 08, 2015, the Secretariat of Communications and Transport (Secretaría de Comunicaciónes y Transportes), by means of the Mexican Aviation Authorities (Dirección General de Aeronáutica Civil, herein referred to as "DGAC") issued the Circular Oblogatoria AV-23/10 R2 which supersedes prior Circular Oblogatoria AV-23/10 R1 in terms of achieving a more thorough regulation for both the civil and commercial operations of UAV.

New Remotely Piloted Aircraft System Legal Framework in Mexico

Prior to the issuance of the *Circular Oblogatoria*, our aviation authorities had regulated civil aviation under the premise that all aircraft were internally operated by a pilot and that such operations commonly included the presence of passengers, cargo or mail onboard.

Remotely Piloted Aircraft Systems (RPAS) are a new concept for the aviation industry worldwide, thus our aviation authorities have worked hard in order to follow their evolution, in order to understand, define and ultimately integrate this state-of-the-art aerospace technology into our legal system, hence of offering and improving the civil and commercial applications and safety of our national civil aviation.

Looking to harmonize our national legal framework with international regulation, the DGAC opted for the use of the newly implemented term RPAS, to the detriment of the formerly used UAV, in compliance with the dispositions adopted by the International Civil Aviation Organization (ICAO), within both the RPAS Manual² issued on March 13, 2015 and its Standards and Recommended Practices (SARPs), as well as with the Notice of Proposed Rulemaking (NPRM) issued by the Federal Aviation Administration (FAA) of the Unites States of America of February 15, 2015 ("Operation and Certification of Unmanned Aircraft"³).

^{1.-} Circular Obligatoria CO AV-23/10 R1

^{2.-} First Edition Doc. 10019, "Manual on Remotely Piloted Aircraft Systems (RPAS)", as approved by Dr. Fang Liu Secretary General of ICAO on 2015 and which was published under her authority.

^{3.-} As provided within section 13.6, "Degree of conformity with national and international standards, policies and guidelines undertaken as a basis for the issuance of this regulation", of CO AV-23/10 R2.



Furthermore, the modifications to the *Circular Obligatoria* for the use of RPAS in Mexico establish the guidelines for the use of a RPAS, as well as the requirements for the approval of their design and their commercial and civil operation.

In general terms, RPAS are composed of a Remotely Piloted Aircraft (RPA) and the equipment required to support and operate said RPA, which will include amongst other items, the operating control station and its navigation equipment. Therefore, *Circular Obligatoria* AV-23/10 R2 is applicable to any and all individuals and entities that operate or intend to operate RPAS within national territory, as well as to those RPAS used by the Mexican state with exception of those used for National Security purposes⁴:

"Furthermore, the modifications to the Circular Obligatoria for the use of RPAS in Mexico establish the guidelines for the use of a RPAS, as well as the requirements for the approval of their design and their commercial and civil operation".

A new method for the classification of RPAS was introduced by the *Circular Obligatoria*, which provides that RPAS will be classified in consideration of their weight and use, pursuant to the following:

Classification of Remotely Piloted Aircraft Systems		
Weigh	Denomination	Use
Less than or equal to 2 kg.	Micro RPAS	Commercial and
		Recreational
More than 2 kg and up to 25	Light RPAS	Commercial and
kg.	5091	Recreational
More than 25 kg.	Heavy RPAS	Commercial and
12	5	Recreational

The aforementioned classification is important in order to determine the regulations and restrictions related to each RPAS. In such sense, the weight and purpose of the RPAS becomes of the essence in order to determine the applicable restrictions, such as the maximum operational altitude, speed limits, insurance requirements and operation authorizations, applicable for each RPAS.

Notwithstanding the foregoing, the aviation authority determined (in lieu of securing civil aviation safety) the existence of general restrictions that are equally applicable to all classifications of RPAS, from which I would like to highlight the following: a) RPAS may not drop, even with a parachute, any object or material than could harm any person or property; b) RPAS are not to operate in restricted or dangerous areas, as such are defined by the aviation authority; and c) RPAS can only be used during day time, unless there is a previous authorization issued by the aviation authority.



Furthermore, Light and Heavy RPAS used for commercial purposes are the only RPAS that require a prior Authorization of Use issued by the DGAC. Additional requirements such as an Operational Plan Approval, registration before the Mexican Aviation Registry, Model Approval and civil liability insurance are required for the use of Heavy RPAS for commercial purposes⁵.

Finally, the *Circular Obligatoria* states that any provision that is not contemplated or included will be regulated by the DGAC.

"RPAS can only be used during day time, unless there is a previous authorization issued by the aviation authority."

In consideration thereof, we believe that our national civil aviation authority is committed to provide a regulatory framework that complies with both national and international standards and recommended practices. Nonetheless, further amendments to our legal framework will be both required and foreseeable as this avant-garde technology⁶ continues to evolve in the near future.

6.- "Limitless possibilities for UAV", Sierra, Carlos in collaboration with Ruelas, Miguel, Terrum, April 2015, year 3 issue 05



First Electric Airplanes Delivered.

China has delivered the first electric airplanes, the RX1E. The airplane is the first of its kind to be actually delivered to a customer despite many others being already in production. The airplane, designed by Shenyang Aerospace University, has a flight duration of one hour, a cruising speed of 86 knots and is being sold for \$163,000 dollars. The airplanes are now being sold in public and according the shipping company there are 28 orders which have placed. *Av Web June 12, 2015.*

Aviation Maintenance Workforce Stuck in Crisis.

Different trade associations are making process to solve the crisis that the Aviation Workforce is currently stuck in. The crisis has been created due to the FAA's lack of an engineer and mechanic classification. By only having a single occupation titles "Aircraft Mechanics and Technicians" a lot of the workforce is being misplaced in jobs. The different association have asked for there to be a new classification type which include different categories like certified mechanics, certified repairmen and non-certified technicians. *General Aviation News June 15, 2015.*

Commercial Drone Rules to be set for 2016.

FAA Deputy Administrator, Michael Whitaker, has reported that the agency plans to implement new rules for the functioning of commercial drones during the first half of 2016. The rules were previously expected to be implanted during the end of 2016 or the beginning of 2017. Whitaker established before the U.S. House of Representatives that the rules should be in place in a year's time, hopefully before June 16 2017. It is expected that the implementation of these new rules will pave way for great innovation in the way commerce works. *General Aviation News* June 21, 2015.

FAA Issues SAIB for Piper PA-46 Aircraft.

The FAA has issued a Special Airworthiness Information Bulletin (SAIB) for certain Piper Aircraft, Inc. (Piper) Models PA-46-310P, PA-46-350P, PA-46R-350T, and PA-46-500TP airplanes following the discovery of fatigue cracking in the wing main spar lower cap near wing station (WS) 79 on one airplane. According to the FAA, during routine inspection of a Piper Model PA-46-350P airplane, a 1.53-inch crack was discovered in the main spar lower cap. The damage was confirmed to be a standard fatigue crack by metallurgical lab evaluation. The crack discovery was at 5,273 hours time-in-service (TIS) versus the type certificated life limit of 15,580 hours TIS. No single cause has been identified for the cracking. However, several individual contributing factors researched in this area include not applying existing Service Bulletin (SB) 796B, severe aircraft operating environment, and non-conforming fastener installations. Piper has issued several SBs related to the damage area and contributing factors. *Aeronews June 22, 2015.*

Mennonite Aviation School in Mexico Inaugurated.

The first Mennonite Aviation School has been inaugurated in the Municipality on Cuauhtemoc, Chihuahua. Many distinguished aviation personalities as well aviation authorities attended the event for what should be groundbreaking institute of aviation education. The aviation school is soon to become one of the leading aviation institutes in the country do to its world class facilities which include a runway measuring 1680 meters long as well as 10 hangars. Besides these facilities the school will also have a faculty which will be comprised of senior professionals in the industry as well as commercial pilots boasting with 30 years of experience. *Mexico Now June 22, 2015*

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Aircraft maintenance: opportunity for SMEs.

Aircraft maintenance is a great opportunity for small and medium-sized Mexican enterprises to become part of the aerospace sector. Kodiak, manufacturer of hides and skins, for example, found its opportunity in supplying skins to renew commercial aircraft seats. In Mexico, there are 30 companies engaged in aircraft repair and maintenance; according to the Ministry of Economy (SE), this market is worth over US\$100 billion, taking into account the military aircraft segment. About 35% of this amount, corresponds to engines maintenance, 23% to components, 20% to Aircraft line maintenance, 15% to aero structures and 7% to modifications. The aircraft repairing and maintenance market, represents a business opportunity for Mexico, as long as infrastructure capacity and skilled labor are strengthened, the country could step up to be the MRO center to provide service to the U.S. and Latin America markets. *Mexico Now June 24, 2015*

NAICM's executive project will be presented later this year.

Airport authorities in Mexico City claimed that, before the end of this year, the executive project of the New Airport of Mexico City (NAICM) will be presented, with an estimated cost of US\$11.26 billion. The project has to be prepared prior to commencing the works that are contemplated by 2016. An executive of the Airport Group of Mexico City (GACM) explained that they are working on the development of infrastructure that will provide adequate connectivity to NAICM and thereby facilitate access to it. The extension of the Mexiquense Circuit is included in the works, with a line of articulated buses (Mexibus - Metrobus), plus they are ready to receive a subway line or a light rail. According to the points made by the current administration, once the expansion is finished in 2018, the civil works of the terminal and runway could be conducted and the first phase of NAICM will begin operations until 2020, with three tracks and a terminal for mobility, thus serving up to 50 million passengers annually. *Maquila Portal June 24, 2015.*

Mexico, in the top 10 aerospace sector players.

About 7000 new aerospace sector jobs might be created this year in Mexico, as a result of the arrival of new companies into the country and the expansion of existing ones, said Sergio Ornelas, MexicoNOW's CEO and organizer of the Mexico Aerospace Summit 2015. He also estimated that, by 2020, the country could be among the top 10 producers in the global aerospace export industry, reaching a US\$12.3 billion annual turnover and 75 thousand job openings. Luis Lizcano, General Director of the Mexican Federation of Aerospace Industry (FEMIA), declared: "The current workforce of 43 thousand employees in the aerospace industry in Mexico, will increase this year with the opening of new service centers (MROs), the National Aerospace Center in Queretaro and other facilities." *Mexico Now June 24, 2015.*

Mexican Aerospace Industry to Create New Jobs.

According to the General Director of the Mexican Federation of the Aerospace Industry, Luis Lizcano, this year the Mexican aerospace industry is looking at a huge increase. Aerospace exports are expected to grow 10% this year bringing a revenue expected to be around 7 to 7.5 billion dollars. This amount compared to the \$424.4 million dollars revenue from last year represents a huge increase in the Mexican Aerospace Industry. Lizcano has staetd that the leading states in the industry are Queretaro, Baja California, Sonora, Chihuahua, and Nuevo Leon. Additionally these increases in the industry are also expected to generate between 48,000 and 50,000 jobs. *Mexico Now June 24, 2015.*

In this month extract was prepared by Vera García, Pablo Domette, Lorena Gay and Harumi Wakida.

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