

A man with grey hair is looking up at a complex piece of aircraft avionics equipment. He is wearing a white shirt. The background is a blurred view of the aircraft's interior, showing various panels and wiring.

# **AVEMEX** COMPLETES HONEYWELL UPGRADE AS ADS-B MANDATE NEARS

Citation X avionics upgrade beats anticipated MRO capacity issues and expected price increases

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## Case Study

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**MANUAL VARGAS RUIZ,  
CHIEF PILOT AND  
FLIGHT SAFETY MANAGER  
AVEMEX:**

"It would have been a major problem for the owner and the company if we had failed to have the aircraft upgraded with ADS-B before the introduction of the mandate. It would have meant stopping all flights to the USA, for example, simply because we had failed to operate an effective maintenance and upgrade program."

**Honeywell**



OVERVIEW

With the introduction of ADS-B Out mandates in Mexico, the USA and other parts of the world rapidly approaching, the chief pilot of a Citation X operating for a global consulting business wanted to ensure that his aircraft was compliant. The work was completed at Honeywell partner Avemex, where there is a belief that there will soon be a shortage of service centers with capacity to handle the upgrades and that prices are set to rise.

BACKGROUND

Grupo Avemex, based in Toluca, Mexico, provides a full range of business aviation services including aircraft management and jet charter.

The company’s maintenance, repair and overhaul (MRO) center supports business jets and turboprop aircraft including all types of Cessna Citation, Beechcraft King Airs, Pilatus PC-12s and HondaJets.

The Avemex service center is a Federal Aviation Authority (FAA) repair station and Directorate General of Civil Aeronautics (DGAC) maintenance workshop. It provides aircraft on ground (AOG) technical support, major structural repairs and retrofits, modification and upgrades (RMUs).

For more than 30 years, Avemex has been a Honeywell partner. Today the firm is a premium dealer and supports all of Honeywell’s avionics solutions.

“For Centro de Servicio Avemex, Honeywell is one of the most important avionics firms that we work with because of the large number of aircraft types that the company’s products are found in,” said Miguel Beyer, service center manager, Avemex.

“The commercial relationship that we have with Honeywell is strategic



to our business. Honeywell provides us with the timely support that we need to offer the best and most effective solutions to our customers. Honeywell is considered part of our family.”

In common with other leading MRO companies, Avemex says that time is running out for aircraft operators to complete their avionics upgrades ahead of the introduction of Automatic Dependent Surveillance-Broadcast Out (ADS-B Out) mandate in 2020.

“We believe that business jet owners are postponing ADS-B upgrades as much as

possible, believing that an extension or waiver will be applicable and that prices for the equipment will decrease,” said Beyer.

“However, due to a shortage of products and capacity in maintenance centers, time is running out for aircraft operators to get their airplanes upgraded. If the work isn’t completed, they risk having their aircraft grounded when the mandates are introduced.”



SOLUTION

ADS-B Out enables an aircraft to use precise GPS data to accurately pinpoint its position in real-time and to broadcast this data – along with its identification, altitude and velocity – to surrounding aircraft and air traffic control (ATC).

The information is broadcast every second and can be received by ATC ground stations as a supplement to secondary radar. Aircraft that are equipped with ADS-B In can also receive the data to provide improved situational awareness.

ADS-B Out will be mandated in vast areas of airspace, including the USA and Mexico, from January 1, 2020 – and in Europe from later the same year. As the mandates near, Avemex anticipates that aircraft operators will encounter issues when looking for upgrades.

“We expect that there will be three main issues in the near future,” said Oscar Nuñez Huitron, modification chief, Avemex.

“First, as MRO companies become busier there will be a shortage of avionics technicians and so there won’t be enough slots available to fulfill the growing need. Here in Mexico there are not many aeronautical shops with the capability to carry out modification installations.

“When customers choose to upgrade their units instead of installing replacements, the time taken to complete the work will increase and the cost of the units, supplemental type certificate (STC), parts and materials will be higher for everyone.

“It typically takes around three to four weeks for the upgrade, depending on the avionics platform installed, the model and age of the aircraft and the STC.

We recommend to our customers that they should now be looking to comply with the mandate.

“Owners will not lose money because the aircraft’s resale value is maintained. Should the owner decide to sell the aircraft, he will get a better price if it is ADS-B compliant.”

**QUICK FACTS**

**Honeywell Solution**

- ADS-B Out
- Customer Name: Avemex
- Location: Toluca, Mexico
- Industry: Private jet charter, aircraft management and MRO
- Website: [www.avemex.com](http://www.avemex.com)

**Customer Results**

- Upgrade ensures aircraft availability for global consulting firm
- Honeywell components retained in aircraft
- Aircraft value maintained – or increased
- ADS-B Out installed ahead of anticipated price increases

**Why Avemex chose Honeywell**

- Aircraft avionics are based on a Honeywell solution
- Company provides Avemex with timely support
- Honeywell is considered as “part of the family”

## BENEFITS

One aircraft that has recently had ADS-B Out installed by Avemex is a 20-year-old Cessna Citation X, owned by an international consulting firm based in Mexico who operates flights across North America to destinations including New York and Toronto.

“The December 31, 2019 limit for ADS-B Out compliance is not a joke,” said the aircraft’s chief pilot, Manual Vargas Ruiz.

“The shortage of service centers and certified equipment for all the work to be completed is expected to get worse every week.

“It would have been a major problem for the owner and the company if we had failed to have the aircraft upgraded in time. It would have meant stopping all flights to the USA, for example, simply because we had failed to introduce a good maintenance program.”

The upgrade took four weeks to complete. It included upgrading a number of avionics units and modifications on the wiring, with Honeywell products at the heart of the solution.

“Most of the equipment on board the aircraft is Honeywell,” added Vargas. “It is very important for us to keep it Honeywell.”

### Honeywell Aerospace

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FUTURE  
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WHAT  
WE  
MAKE IT

**Honeywell**