

PRODUCT SUPPORT SURVEY 2014

Embraer

Embraer inaugurated its newest factory-owned service center in Soracaba, Brazil, in March. Able to fit up to 45 aircraft for storage and maintenance, the \$25 million facility is five times larger than Embraer's headquarters service facility in São José dos Campos. Embraer currently has 68 service centers worldwide (a combination of factory-owned and authorized facilities), and many are preparing for the imminent entry into service of the Legacy 500 and next year, the 450.

In the U.S. Embraer opened a factory-owned service center at Teterboro Airport. The Asia service network grew with the addition of an authorized service center in Jakarta. Parts have been consolidated at Embraer's regional distribution center in Singapore, and the company expanded its Australia and India parts depots. At the Le Bourget service center in Paris, Embraer has added a mobile response unit, airworthiness management service and line maintenance for the Lineage 1000. Falcon Aviation Services, an Embraer authorized service center, opened its new 106,000-sq-ft facility at Al Bateen Executive Airport in Abu Dhabi late last year.

Last September, Embraer moved the customer support team from its Fort Lauderdale, Fla. service center to the Melbourne, Fla., production facility and engineering center. The Melbourne move includes the customer support management team, warranty, Embraer Executive Care sales and administration, field support, material services and finance. The service center itself will continue to be located in Fort Lauderdale.

Last year Embraer held 10 global conferences and nine mini conferences as part of its

Embraer Executive Operators Conference series. More than 400 customers and operators participated, along with customer support and service center teams and suppliers. Embraer's Customer Support Contact Center celebrated its fifth anniversary this year, and the company is building a new facility where technical teams will be better integrated and offer more comprehensive around-the-clock support, according to Embraer.

Embraer's Customer Support and Service guide has been upgraded and is available in iOS or Android versions. A new feature is the "request support" function, which allows customers to make a support request to the Embraer Contact Center, and it also saves the customer identification in the app for future requests.

Gulfstream

Gulfstream's product support organization added about 300 new employees during the past year. In Canada, Gulfstream granted its first company authorization for warranty maintenance in Canada, to Skyservice.

Gulfstream's factory-owned service center added wheel and brake capabilities and landing-gear component repairs in Appleton, Wis.; received CAAC approval for 1A through 6A inspections on the G200, G450 and G550 in Beijing; added a battery shop and a Spanish-speaking service center coordinator in Dallas; expanded the carpet and wood shops and added a tire shop in Long Beach, Calif.; and installed a G280 graphical flight simulator at the In-Flight Support Center in Savannah, Ga., to aid troubleshooting by allowing technicians to mirror in-flight circumstances. The Savannah center also received six



Gulfstream

monitors that show the status of the Gulfstream fleet worldwide, providing "a real-time visual overview of any AOGs."

New Gulfstream facilities include a parts/materials distribution center in Van Nuys, Calif., which will be stocked with \$15 million worth of inventory by year-end. Gulfstream opened an Asia Customer Support Contact Center in Hong Kong, providing over-the-counter parts sales and warranty and technical operations support. The parts warehouse in Hong Kong was also expanded.

The Computerized Maintenance Program (CMP.net) was renamed MyCMP and redesigned to help customers navigate the website and enjoy greater functionality.

Gulfstream's iOS app, introduced in August last year, enables direct access to product support resources, including Gulfstream technical operations, factory-owned and independent service centers, warranty facilities, field service representatives, parts sales and other product support contacts.

The Field and Airborne Support Teams (Fast), which include mobile support and Gulfstream's G150 for quick problem resolution, added five technicians in Europe, bringing the total to 11 for handling issues in Europe, Africa, Asia and the Middle East. A G150 flew to Brazil to support operators during the FIFA World Cup. Gulfstream outfitted a 74-foot tractor-trailer equipped with tools, parts and technicians to support operators at events throughout the U.S. Three other Fast vehicles were added during the past year, in Houston and the New York and Los Angeles metropolitan areas.

Mitsubishi

There are 285 Mitsubishi MU-2 turboprops still flying, with approximately 250 of those in North America, and Japanese manufacturer Mitsubishi Heavy Industries America (MHIA)



Mitsubishi

continues to provide strong support for the high-performance twin turboprop, the last of which rolled off the assembly line in 1986.

Service for the fleet is available from factory-owned and independent service centers, but a key part of the support network is Turbine Aircraft Services, based in Dallas, which is under contract to MHIA to manage MU-2 support activities. This includes the biennial MU-2 Pilot's Review of Proficiency (Prop) seminar series, four of which were held this year, as well as alternating-year safety meetings. These events are free and often attract not only long-time MU-2 pilots but also people who are considering buying an MU-2.

"We had one of the most successful Prop series of all time in 2014," said Pat Cannon, president of Turbine Aircraft services. He was encouraged to see a new crop of attendees, pilots who are new MU-2 owners and care deeply about safety. "They're all over the technology, training and doing things as they should be done," he said. These buyers are passionate about upgrading their MU-2s, and many are installing Garmin G600 and GTN650/750 avionics. They are also likely buyers of the soon-to-be-certified Alpha Systems angle-of-attack warning system.

Turbine Aircraft and MHIA are also looking into replacing Plexiglas cast windshields with stretched acrylic units, which will last longer. Another project is replacement of deteriorating faceplates on control wheels,

all of which are decades old. "We've undertaken a program to use 3-D printing to build new facing plates," Cannon said.

Ultimately, an STC to replace MU-2 control wheels with Beechjet yokes might make sense, and this would also include the Beechjet's four-way trim switch. "I have reopened my discussions with the wheel manufacturer and with the person who owns the four-way trim switch mod, and we're probably going to do it if it's practical," he said. An STC for new hoses to replace expensive Japanese-made flexible hoses is in the final process, and this will help cut costs for operators.

For any parts that are in short supply, Turbine Aircraft and MHIA figure out how to source enough parts for the next 10 to 15 years, according to Cannon. "[MHIA] is still attuned to making an effort to service this airplane long into the future."

Keeping the fleet flying is not just about supplying parts, however; it has more to do with creating a robust safety culture throughout the MU-2 community. Before 2009, when the Special FAR requiring mandatory MU-2 pilot training took effect, there was a lot of pressure on the FAA from politicians who wanted something done about the MU-2's safety record. The agency asked MHIA to survey MU-2 owners about what was wrong with the MU-2, and 175 people responded, indicating that there was no consistent or mandatory training program. The result was that when the SFAR was enacted, "there was

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very little pushback,” Cannon said. “The majority of operators applauded the FAA.” Training to meet the SFAR requirements began before the 2009 implementation, because compliant training was grandfathered. The result of the SFAR-mandated initial, recurrent and requalification training is that the number of MU-2 accidents has dropped significantly, with just two fatal accidents since the SFAR took effect, “and neither one should have happened,” he said.

“The theme of the next series of Prop seminars is going to surround the idea of ‘Don’t just have a safety culture—live the safety culture,’” Cannon concluded. “That’s where we want to take this.”

Pilatus Aircraft

The Pilatus PC-12 single-engine turboprop fleet numbers 1,250, with 4.5 million flight hours in its logbooks. The latest model, the PC-12/47E (NG), has already passed half a million hours by 450 aircraft.

Product support improvements for the fleet introduced during the past year include a new Pilatus customer service mobile app for both iOS and Android devices. The app provides instant access to the nearest service center and Pilatus customer support contacts, documentation status lists and access to YouTube and Vimeo channels for PC-12 videos, including Honeywell Training TV videos. PC-12 training, promotional and customer testimonial videos are available on the

Pilatus website.

Pilatus conducted 11 M&O seminars and regional operator conferences during the past year on five continents. The technical publications order process was streamlined, according to Pilatus, “by offering multi-year and multi-product bundles.”

Air Alliance in Germany was appointed a PC-12 service center last year, and Aeroservicio of Chile and Avcraft Engineering of New Zealand were appointed satellite service centers.

The 2014 PC-12 NG has new features that will reduce operating costs, such as an electric landing gear, which shaves 13 pounds off the empty weight, and all-LED external lighting. The Connected Flight Deck, developed in partnership with Aspen Avionics, Honeywell and Jeppesen, has been ordered by more than 70 percent of PC-12 NG buyers. Features include four iPad apps that interface with the Aspen CG100P Connected Gateway installed in the PC-12. The apps offer easy wireless database updates, uploading of off-aircraft flight planning into the FMS, maintenance and diagnostic recording and moving maps for passengers.

Textron Aviation (Beechcraft and Cessna)

Following Textron’s purchase of Beechcraft earlier this year, the company has begun merging product support efforts for its Beechcraft and Cessna brands, and Brad Thress was appointed senior vice president of customer



Textron Aviation

service. There are now 21 factory-owned service facilities worldwide for Beechcraft and Cessna support and some 40 mobile service units in North America and Europe. These units have made 12,000 visits since they were launched.

All of the Textron Aviation facilities are transitioning to offering maintenance services for Citations, Hawkers and King Airs, with mechanics undergoing cross training and EASA approval to work on multiple types. Before Beechcraft’s acquisition by Textron, most Hawker and Beechcraft maintenance in Europe was done by authorized third parties, but Textron now offers the option of factory-provided maintenance for those aircraft.

The Textron service network is also in the midst of consolidating two separate networks of parts distribution and field service teams.

In Europe, Textron Aviation’s service centers have received EASA continuing airworthiness management organization (Camo) approval in Paris; Doncaster, UK; and Düsseldorf, Germany. This allows these centers to issue and extend airworthiness review certificates to EASA-registered aircraft.

In Europe, the company opened three new line support stations for Beechcraft and Cessna aircraft, at London Luton Airport, Cannes Mandelieu Airport and in Geneva. Services include repairs, inspections and AOG support.

For operators of Citation CJ2s, Cessna introduced the CJ2+ Alpine edition, which includes an upgrade to the Garmin G3000 avionics suite, automatic pressurization and a new environmental control system, new diagnostic systems, ADS-B OUT capability and upgraded cabin features.

Twin Commander Aircraft

Owners and operators of Twin Commander turboprops (and even the piston-powered models) enjoy continued support from Twin Commander Aircraft, and there are still about 700 of the various turboprop versions flying. There are 23 authorized service centers.

The big trend for Twin Commander owners has been avionics upgrades, and the STC for the Garmin G950 suite is a bestseller, according to Twin Commander’s Mark Matheson. “They’re selling them as fast as they can build them,” he said. The G950 is basically a G1000 without a Garmin autopilot, and it works with the S-Tec 2100 autopilot that many owners have already installed.

Twin Commander owners were faced with an expensive FAA airworthiness directive involving cracks in the aft pressure bulkhead (covered by Service Bulletin 241). Twin Commander Aircraft was able to lower the cost of compliance a bit by obtaining FAA approval for a staged approach to conducting the expensive repair. “The majority of the fleet has complied,” Matheson said. “This was an effort by Twin Commander to be proactive and keep them flying.”

To help keep the fleet healthy, Twin Commander launched its own maintenance training program because such training isn’t available from SimCom, the official flight training provider. Four training events will be held this year.

Other improvements include an updated fuel tank kit (CK 189), a kit for installation of high-intensity-discharge landing/recognition lights (CK 182L) and LED lights for the cabin (CK 190). The cost of replacement electrically heated windshields is an issue, and

Twin Commander is offering a \$5,500 rebate for each side.

Each year, the company holds a Twin Commander University event, and nearly 80 owners attended this year’s event in April.

ROTORCRAFT

AgustaWestland

Customer support and training accounts for 40 percent of AgustaWestland’s revenue. The helicopter manufacturer has revamped its approach to support maintenance by taking advantage of common components, cockpit equipment, maintenance equipment and tools. For fleet operators that fly at least two of the manufacturer’s three production models, AgustaWestland says it has been able to improve support and efficiency, reduce life-cycle costs and improve mission effectiveness significantly.

Support for the new AW189 is enhanced by a ground maintenance simulator, advanced health and usage monitoring system and virtual maintenance training. This approach is also being applied to the in-development AW169.

AgustaWestland has developed a new progressive maintenance program for the AW139 that will “maximize availability.” The AW139’s main-gearbox TBO has been extended to 6,000 flight hours and the tail rotor and intermediate gearboxes to 7,500 hours, a 20-percent and 50-percent increase respectively. The company’s interactive electronic technical publications for the AW139 are now available on tablets and smartphones.

A new repair and overhaul facility was added to subsidiary Agusta Aerospace Services in Zaventem, Belgium, and its AgustaWestland do

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Pilatus