P artly as the result of a 10-percent survey return rate (which experts consider statistically significant) and partly because we have improved our survey methodology, this year’s report contains more depth, including the addition of several OEMs to the ratings list. These changes notwithstanding, for the fourth consecutive year readers gave Gulfstream the highest marks for both newer business jets (less than 10 years old) and older business jets (10 years or older).

In addition, readers placed OEM customer service of Gills, Gills and the Westwind/Astra series—now supported by Gulfstream sibling General Dynamics Aviation Services (GDAS)—in second place behind Gulfstream for support of its older GIVs and GVIs.

Boeing, which appears in the survey for the first time, dislodged Raytheon (for its Hawker 400XP and Beech Premier support) for a second-place finish among newer business jet manufacturers. Boeing also edged out Cessna for second place in the overall rating for combined scores (where appropriate) of both newer and older business jets. AIN received responses from operators of 46 Boeing Business Jets, more than double the number of BBJs in service.

Cessna retained its third-place standing among newer business jets but dropped from second to third position among older business jets, behind new entry GDAS. The overall score of support for older Gulfstreams and IAI jets resulted in a 21.69-percent increase in overall average rating over last year. GDAS took over support of the Gill and Gill in January and is in the survey for the first time as an OEM product-support provider.

Dassault logged the greatest percentage increase in the overall average among newer business jet OEMs, but the French manufacturer did not move up the ratings ladder and retained its fourth-place position. The higher overall average ratings it received, combined with lower overall ratings by some of the other OEMs, also kept Dassault in fifth place (behind GDAS) in the combined newer and older average ratings.

Raytheon had mixed and perhaps the most surprising results. In the category of newer business jets, the company’s overall average rating for support of Beechjets, Hawker 400/400Ps and Premiers decreased 1.56 percent from last year’s survey, helping to pull down this OEM’s product support standing from second among newer business jets last year to fifth position this year—behind Dassault and ahead of its own support for the Hawker 800/850/1000 series.

According to survey results, overall support for the Hawker 800/850/1000 series improved more than 4 percent, but the higher score of new entry Boeing served to realign Raytheon from fifth to sixth place among newer business jets. Further, a 6.11-percent decrease in support of older Hawkers and the higher rating of new entry GDAS conspired to oust Raytheon from third place among older business jets to fifth and eighth positions.

The overall rating for customer support of older Diamonds and Beechjets landed Raytheon in the fourth position, tied with Dassault, for support of older business jets. But the OEM slipped from third to seventh among the combined newer and older aircraft ratings—again partly due to the higher ratings of new entries Boeing and GDAS.

Embraer also dropped a couple of positions—from sixth last year to eighth this year among the newer business jets (despite an overall rating improvement), and from fourth to sixth compared to the combined overall scores of manufacturers that must support both newer and older airplanes.

Mitsubishi was the only other jet OEM to have an overall score this year that decreased from last year among manufacturers of newer business jets. For example, the overall rating for support of newer Learjets and Globals decreased 4.75 and 1.28 percent, respectively. This contributed to Bombardier’s remaining at the bottom of the product support ratings.

Further, the overall score this year for support of newer Challengers increased 3.45 percent, but that didn’t do anything to elevate the Bombardier Challenger from its seventh overall position among the newer jets. What’s more, Bombardier slipped from fifth to seventh place for its overall support of older Challengers.

If not for new entry Sabreliner, Bombardier would have retained its last-place position when comparing the scores of combined newer and older business jets. New entry Sabreliner received the lowest overall rating among all business jet OEMs—5.58.

**Mitsubishi, Pilatus Still Reign**

In the older turboprop category, Mitsubishi retained its lead position despite the fact that its overall average rating decreased from 8.76 last year to 7.87 this year. The overall rating for newer Pilatus PC-12s also dropped (from 8.11 to 7.19 year over year), but the Swiss manufacturer still held the number-one position among newer propjets and the number-two slot for ratings of combined newer and older airplanes.

Cessna got edged out again—this time from third to fourth place in the older turboprop segment and from fourth to fifth place in the combined newer and older segment—partly because of its decreased overall score and partly because of the higher score of new entry Twin Commander Aircraft (TCAC). The overall rating of 6.27 for support of Twin Commanders propjets placed TCAC in fourth position among older turboprops and in fourth position among newer and older manufacturers combined.

As it has in past surveys, Piper rated last for its support of Cheyenne. However, the company’s score improved by more than 25 percent year over year.

**The Return of Rotorcraft**

A statistically invalid response from helicopter operators last year prevented a report on this segment of the industry in AIN’s 2005 Product Support Survey. Such is not the case this year. Operators of nearly 350 rotorcraft submitted surveys, ranking Bell in first place and MBB in last place. Eurocopter and MBB are supported by Eurocopter but were graded separately in this report to show the difference in support levels that readers say the French-German company provides to its newer aircraft (rated under Eurocopter) and the two older aircraft models (Eurospatiale and MBB) for which it is responsible.

The operators of Eurocopter-built aircraft rated OEM support better than did the operators of the older aircraft that were built before their respective OEMs merged.
The intent of the annual AIN Product Support Survey is to give readers as highly accurate and complete a picture as possible of how well the OEMs and their authorized service facilities provide customer support.

Past surveys were done entirely on paper via mail and faxes. This method proved satisfactory, but this year we decided to conduct the survey electronically via the Web and e-mail. To help us do this properly we contracted with Newtown, Conn.-based Forecast International, a 32-year-old provider of data for the aerospace industry. With Forecast International’s assistance, AIN designed an electronic survey form similar to a paper form we mailed or faxed to AIN subscribers.

Those receiving a “paper” survey were told to complete the survey electronically via the Web and e-mail. Those receiving a “paper” survey were told to complete the survey electronically via the Web and e-mail. Those receiving a “paper” survey were told to complete the survey electronically via the Web and e-mail. Those receiving a “paper” survey were told to complete the survey electronically via the Web and e-mail. Those receiving a “paper” survey were told to complete the survey electronically via the Web and e-mail.

The data provided by AIN readers and “crunched” by Forecast International is so voluminous that to provide a quality report on each of the main product segments—aircraft, engines and avionics—it is necessary to split them into separate articles. We believe that only by doing this can we present the complete and qualitative analysis that the survey results deserve.

With that in mind, this month’s article will cover survey results pertaining solely to aircraft models acquired through acquisitions and mergers over the years.

Gulfstream Aerospace no longer has product-support responsibility for Gills and Gill, factory support for these aircraft having transferred to Gulfstream sibling General Dynamics Aviation Services on January 1.

The change addresses operators’ concern that their Gills and Gills sometimes take a back seat when competing with newer models for maintenance attention at Gulfstream’s factory-owned service facilities. GDAS is already responsible for supporting the Westwind/Astra fleet. Finally, our readers are a vocal and critical group when it comes to product support. In most cases, the top three ranked companies received overall average scores between 4.86 and 6.42. Mitsubishi received the highest score in a single category—8.67 for technical reps.

We also asked for comments in each of the categories. To help focus the responses, here were the key points we asked respondents to consider within each rating category:

- Authorized/Facility Service Centers:
  - cost estimates versus actual, on-time performance, scheduling ease, overall service experience.

- Parts Availability:
  - in stock versus back order, shipping time, paperwok.

Cost of Parts:
  - value for price paid.

AOG Response:
  - speed, accuracy, cost.

Warranty Fulfillment:
  - ease of paperwork, extent of coverage.

Tech Manuels:
  - ease of use, formats available, timeliness of updating.

Tech Reps:
  - response time, knowledge, effectiveness of visits.

Overall Product Reliability:
  - how the product’s overall reliability and quality measured up to your expectations and the provider’s promises.

More than 16,000 AIN subscribers were selected to take the survey. Vindicating our decision to take the process electronic, we received a 10-percent response, by far the highest of any AIN product support survey. The more than 1,600 respondents operate a total of 3,483 aircraft.

In some cases, a particular manufacturer’s (such as Raytheon and Bombardier) aircraft are separated into multiple groupings to reflect possible differences in the level of support for aircraft models acquired through acquisitions and mergers over the years.
In their own words

AUTHORIZED SERVICE CENTERS

The chief pilot for a Wilson, N.C., flight department that operates a Citation 550 wrote: “Citation service centers are the worse [sic] at inaccurate prices and inaccurate downtimes. How do these places stay in business treating people and airplanes the way they do? Most every system you have ‘fixed’ has had to be repaired somewhere else.”

The chief of maintenance for a company in Blue Grass, Iowa, that flies a Citation V said: “Authorized service centers appear to have some expertise as factory centers and will do the same job for a better price.”

Maintenance technician Michael Hodgın of Swagelok Flight Operations, Highland Heights, Ohio, who maintains a Challenger 601-3A, wrote: “General Dynamics [Aviation Services] in Appleton, Wis., is high on my list of service facilities. For parts, they have the ability to do a job not far off of the original quote. Excellent people to work with.”

Midcoast Aviation got two thumbs up for Challenger work from two Midwest companies, as well as a Falcon operator, although the Falcon operator, a large charter/management company, believes “Dassault needs to authorize more facilities.” This operation also believes some facilities are “quite good” for the Global Express, “but some are lacking in willingness, ability and concern for product support,” particularly in overseas operations.

Midcoast also got a good word from maintenance manager Bob Bauer for a Global Express operated by United Technologies. Midcoast is the “best in class for facilities and personnel. A pleasure to do business with.”

Duncan Aviation received praise from several operators of Learjets, Citations, Challengers and Hawkers. But not from an aviation manager for a Citation VII operation: “Duncan’s strength is the large inspections. They are weak on troubleshooting systems. Not impressed by the recent paint job.”

A senior captain for a Midwest operator of a King Air wrote: “Elliott Aviation at Des Moines International Airport maintains the King Air and does a very acceptable job. Parts seem to be becoming harder to come by, but Elliott Aviation seems to always find what we need, although often at a steep price. They also have experienced mechanics that know King Airs and are very good at getting us in at a moment’s notice.”

Larry Richards, aviation manager for a southern-based operator of a Falcon 10 and Falcon 20, said: “Landmark is good. Premier Aviation at Alton, Ill., blows everyone else away in service and technical expertise with respect to Falcons.”

Joel Felker, director of maintenance for a southern-based operator of a Falcon 50 and 900EASy, wrote: “Good support from several authorized service centers around the states, but out-Jet Aviation PBI is excellent. Garrett [now Landmark] at LAX is good also.”

David Fortin, chief pilot for Shinn Enterprises, Oklahoma City: “General Dynamics Aviation Services in Dallas has been a pleasure to work with on our Gulfstream IISP. Its mechanics seem to be very experienced, and its pricing is very competitive with other shops.”

Mark Gardner, a Gulfstream G200 operator and aircraft manager for charter/management firm Executive Jet Management, said, “Jet Aviation in West, Texas, voiced essentially the same opinion.”

“General Dynamics [Aviation Services], Las Vegas, good overall service,” wrote the chief pilot for a Northeast operator of a Gulfstream IV: “A little slow on parts delivery, but excellent on technicians.” However, a GIV operator based in the northwest had a different opinion: GDAS in Las Vegas, he wrote, “brings the average way down for service centers. No problems anywhere else.”

Jürgen Wiese, aviation department manager for a European-based operation that flies a Hawker 800XP: “Jet Aviation Zurich did a fantastic job of keeping our aircraft in perfect flying condition during the somewhat lengthy sales process. Jet Aviation Basel is doing great on the Falcon 2000EX EASy.”

Ken Hall, director of operations for Ahern Rentals, wrote: “Premier Air Center, ALN, completed the RVS and TAWS compliance on Citation 525-0341. Their quote was 27 percent below the cost of a bid from a factory service center. Shop completion standards were excellent. All work was completed on schedule and on budget, adhering to the quote precisely. All personnel from sales, engineering, maintenance and administration were very cordial and highly professional.”

“In the past, I have been reluctant to venture outside the factory-owned service center network for major maintenance. Premier Air has changed my perception. Lower cost does not necessarily mean lower quality. I would highly recommend Premier Air Center, and I will continue to utilize their services for future maintenance.”

FACTORY SERVICE CENTERS

Two Challenger operators wrote about their negative experiences with Bombardier’s factory service centers.

Doug Gordon, director of maintenance for Pittco in Memphis, which operates a 601-3A, said, “I have lost my confidence in dealing with most of the factory service centers.”

The director of aviation and chief pilot for a Colorado-based company said about his 604: “I would not recommend [Bombardier] Tucson to anyone. They are unpleasant and very argumentative. Wichita didn’t seem up to par either.”

Cesna’s Citation service center in Wichita is one of the largest maintenance facilities in the world.

2006 Ain Product Support Survey

experienced a decline in availability of parts and personnel over the past several years. The effect on performance has been to slide from an outstanding service center five or six years ago to barely adequate. Our feeling is that this is a result of maintenance activity in Montreal rather than the local team.”

The director of aviation for a Learjet and Challenger 600-operating Midwest-based industry wrote: “Factory service centers are consistently higher priced than authorized centers and rarely complete jobs on time. Billing is always difficult, requires a lot of time to dig through and get it right.”

The chief rotary-wing pilot for a U.S.-based operation of an international charter/management firm had this to say about Agusta A109 factory support: “overbooked, not enough technicians, unable to supply service in a timely manner. Lacking in quality control.”

William Howell, v-p and director of maintenance for a financial institution, said, “all Cesna factory service centers are very good.”

Jay Jacobs, chief pilot for Beechjet operator Swing Plane Aviation in Ball

Continued on page 24 ★

In addition to giving a numerical value to OEM service and support, survey respondents submitted hundreds of comments about their support experience. Ain regards the comments as anecdotal insight into how respondents rated the way they did.

Vendor companies that scored higher were not without their critics, and companies that scored lower had their fans. It’s important to remember that squawks voiced in the comments are often based on a single or small number of incidents and might not represent a vendor’s or OEM’s overall performance in product support.

However, that said, the comments overall supported the numerical scores. The majority of comments were positive for Boeing, Canadair, Gulfstream, Mitsubishi and Pilatus. The majority were negative for Bombardier and Piper. And they were generally split down the middle for Dassault and Raytheon.

In past Ain product support surveys we received fewer comments and they were organized by type of aircraft and manufacturer because we had only one space for comments on each survey form. This year, to improve both the quality and quantity of comments, we asked readers for a response to each of the nine rating categories. That resulted in a response rate beyond our expectations.

Readers clearly took advantage of the ability to focus their responses on specific topics. Because of this focus, the comments are arranged in order of the rated categories. Unfortunately, space does not allow Ain to print every one of the several hundred responses submitted. Therefore, Ain took care to select a sample of nearly 150 that we believe are useful, pertinent or insightful. The names of respondents and their companies are included.

Bell was rated highest among rotorcraft and Pilatus scored best for newest turboprops.
I spent three weeks in a CCSC and never met the management above the lead man running my job.”

David Vegh, line captain for a southwestern-based Citation 560XL, operator, said: “All but one center has been terrible in completing the checks on time. More than once we have delivered the crew to pick up the aircraft at the time we were told only to have them wait for several hours and as long as a day-and-a-half. Very frustrating. And it is frequent.”

Paul Hansrote, captain at a southern base for an international charter/management firm: “Cessna Citation Service Centers are by far the best OEM service centers for any of the light and medium jets. Nonetheless, there is huge room for better quality in nearly all areas. It is a shame that General Dynamics sold Cessna to Textron. It’s fun to imagine what the aviation world would look like if Gulfstream and Cessna had been paired.”

Roger Lipcamon, director of operations for an upper Midwest company: “If I were rating the MIKE Citation Service Center, they would rate 9+ across the board. As for ICT, 5 at best. Accounting/invoicing for work completed rates 1. Over five years of using the facility, with visits for minor items to Phase 1-5 and engine Check 3’s, we have yet to receive an invoice that was without problems. The overcharges were properly credited but only after multiple phone calls for each.”

Chief pilot Ephraim Ingals of a West Coast company wrote: “Turbomeca engine factory repair experience has been completely unsatisfactory, with two engines returned to Turbomeca four times for rework after in-flight failure. Customer support reps from Turbomeca fail to return calls and to follow up on agreed-upon agendas and procedures.”

From the manager of an aircraft maintenance for a recreational vehicle manufacturer: “Factory Hawker service centers do a pretty good job most of the time.”

Director of maintenance for a southern-based service company: “Factory service centers vary greatly in their abilities. Citation appears a little better than Raytheon, but both (in our region) are lacking in customer service, timeliness and communication. Once either aircraft is dropped off for work, it takes a lot of effort on our part to determine when the aircraft will be ready.

Both [companies] have shown evidence of rushing through the authorized work, failure to properly identify a problem and unnecessary repair.

“This was not the case when we had some work done in Gulfstream serv-ice center in the Carolinas. They were not only on time and communicated all problems but kept me in the loop throughout. The work was very good, and they beat their estimated time by several days.”

Alex Goodwins, chief of maintenance for a UK-based Gulfstream G550 operation, had this to say: “[I] only use Savannah facility. All my experiences have been generally good. GAC lets itself down with parts supply sometimes. Having a UK-registered plane is sometimes also a problem because the company’s return-to-service personnel aren’t quite up to speed with EASA. But then who is?”

**PARTS AVAILABILITY**

Doug Gordon, director of maintenance for Challenger 601-3R operator Pittco of Memphis, had this to say about parts availability at Bombardier: “You would think that Bombardier would know what parts they do or do not have in stock, that are high-failure items and that are in high demand, and stock accordingly. Being forced to purchase parts from Bombardier’s competition when I am on Smart Parts is not a good thing.”

The chief of maintenance for an international electronics concern that operates a Challenger wrote: “No availability issues on either aircraft; however, parts reliability out of the Smart Parts system for a 601 has been very poor, often requiring several components to get one good one.”

An aviation manager with TAG Aviation said regarding its Global Express: “Strange, but items that you would think would be hard to get seem to come through in a timely manner, but parts that are more subject to failure we have difficulty getting.”

A maintenance technician for a
Northeast-based flight department wrote: "Global Express parts availability for 2005 was pitiful at best. Don’t sell aircraft you can’t support."

The director of aviation for a Midwest manufacturer that operates a Learjet wrote: "Bombardier is trying hard to rectify parts shortages. It is saying the right things and apparently putting a lot of resources into this problem. This has been a long-time problem that can’t be fixed overnight, but we are seeing progress."

The chief of maintenance for a Northeast company said: "Gulfstream does not support in-service aircraft with parts. They use the parts just-in-time approach, which works in the factory but not in the field. We lose valuable days every inspection waiting for parts."

From the director of maintenance for a southern-based flight department that has a Learjet 45: "Continuing problems with lack of stock, particularly with T/R harnesses, flight-control cables; vendors out of business."

A pilot for an upper northwestern-based company that flies the Hawker 700 had this to say: "Had a gear overhaul and paid well in advance but there was a scramble for parts, and when it came time to do the work Duncan couldn’t get some parts and we were left out to dry for an extra 45 days. We did our part to assure the gear would get done in a timely manner, but someone else didn’t." The Northeast operator of a Beechjet 400A wrote: "Rapid [Raytheon Aircraft’s parts department] never has a thing in stock. It’s always on back order."

From a Hawker 800XP operator in the South: "Rapid has nothing on the shelf. AOG situations are better dealt with by outside vendors, if the part is available to vendors."

The chief of maintenance for a Northwest company said: "Bombardier’s cost of parts is considerably higher than other vendors. But they have you stuck in your Smart Parts contract so all you can do is complain."

An international electronics firm took issue with Bombardier’s parts program: "Smart Parts for the Challenger 601 is convenient but way over-priced. Can often find better parts at less than half the cost at other locations. As an example, Smart Parts quoted over $200,000 for aileron PCUs, but we were able to get exchange units from PCU manufacturer for less than $8,000."

Paul Hansrote, Citation Encore captain at an international charter/management operation, wrote: "The cost of parts is less annoying than the reliability. Cessna does not effectively track for rogue parts. One large fleet operator began tracking R&Rs of individual parts and found that Cessna had sent the same part up to 17 times, only to have the rogue fail every time in a very short amount of time. Every time the offending item returned, the paperwork stated the thing had been bench checked and ops checked OK. This is not isolated and requires calls for prompt action in Wichita."

From a Falcon operator: “Dassault is making efforts to listen to the customers’ requests about parts pricing. Dassault has asked customers to tell it other vendors’ prices and they listen. When possible Dassault tries to change pricing. It has also in the last year or so informed operators when prices on model-specific parts have been lowered. We are willing to pay a slightly higher price for the parts from Raytheon is exorbitant.”

The chief pilot for a Virginia operation said: "B200 parts are through the roof."

Marcus Brunninger, captain at a European company, wrote: “All Falcon parts are expensive.”

Of the BBJ, one director of maintenance wrote: “BBJ parts are extremely high. Limited vendors to get..."
How old an aircraft is and how much it is used are factors in how much product support is required and how costly that support is going to be in both dollars and downtime. This chart shows the average aircraft age and annual hourly usage of the respondents’ aircraft. For that portion of the total fleet, the average age for most business jet models is more than five years (beyond typical new-aircraft warranty periods) and most are in the air more than 500 hours a year.

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>Average Age (Years)</th>
<th>Average Annual Hourly Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raytheon Premier I</td>
<td>14.2</td>
<td>506.50</td>
</tr>
<tr>
<td>Hawker 1000</td>
<td>15.0</td>
<td>495.60</td>
</tr>
<tr>
<td>Challenger 601-3A</td>
<td>13.5</td>
<td>517.89</td>
</tr>
<tr>
<td>Gulfstream G100</td>
<td>13.0</td>
<td>520.00</td>
</tr>
<tr>
<td>BBJ/737</td>
<td>12.0</td>
<td>523.50</td>
</tr>
<tr>
<td>Cessna Citation CJ2</td>
<td>12.0</td>
<td>525.00</td>
</tr>
</tbody>
</table>

As Time Goes By

EEBA’s standing for support of the Legacy 500 improved this year, due to its better marks and Raytheon’s worse marks.

The director of aviation for a large manufacturer said: “Although Bombardier understands that AOG response is critical to customer satisfaction, there is still a lack of responsiveness from the ‘front line.’ The passion to do it better needs to shift down through the organization in Japan. Got pretty good response from Montreal but they were still confused as to whether they sent the part and whether it was the right one. Doesn’t bolster our confidence.”

A representative of an international supplier of office equipment said, “Gulfstream really shines. Bombardier should be ashamed of itself.”

**AOG RESPONSE**

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A representative of an international supplier of office equipment said, “Gulfstream really shines. Bombardier should be ashamed of itself.”

Captain Barry Newsham, Newsham Holding, flying the Hawker 800B: AOG “poor. Recently AOG 11 days with transponder problem and seven days with engine problem.” On the flip side, the manager of aircraft maintenance at a Midwest-based recreational vehicle concern wrote, “Hawker AOG response is excellent.”

Tim McQuain, director of maintenance for RCR Air of Lexington, N.C., which operates a Hawker 700, wrote: “When Raytheon started pulling discounts from the service centers, our discounts went away as well. This way Rapid can sell more parts. The operator absorbs the cost difference. I am just glad we operate only one each of these aircraft and not three, like our Embraer 120s.”

The director of maintenance for an Indiana company had this to say about the AOG response: “I believe there will always be complaints about the cost of parts. I try to remind myself that the components on a corporate aircraft are usually produced in fairly small lots, as compared to an aircraft with high production rates such as the 737 or a mass-produced automobile. However, you’re still paying for the same research and development costs, certification costs, tooling and manufacturing costs, and the ever-growing cost of liability…there’s just less production to dilute [costs] over.”

**Embraer’s standing for support of the Legacy 500 improved this year, due to its better marks and Raytheon’s worse marks.**

**Gulfstream’s dedicated customer support G100 N247PS provides 24/7 product support.**

**Raytheon support for the Premier and Beechjet lost ground considerably over the past year.**

**Continued on page 30**
AOG is "absolutely fantastic. Much better than most."

The chief pilot for a Midwestern firm that has a Learjet 25G had this to say: “Aircraft AOG for 30 days waiting for throttle cable. When part was delivered to Learjet, they lost the paperwork.”

The director of corporate aviation of a southwest-based industry wrote: “Gulfstream [General Dynamics Aviation Services] has done a very good job of supporting its Westwind stepchild. It is an improvement over IAI.” But for the Challenger 604, “Let’s say Bombardier’s idea and my idea of the urgency of AOG are two different things.”

WARRANTY FULFILLMENT

Of the Citation Bravo, Boyd Roberts, line captain for a Texas-based company, said: “Cessna was OK on the warranty, but every time we went in for warranty [work], they had to run the engines for its pre-work checklist and burn precious fuel. Not in for engine problems, might I add.”

Ken Hall, director of operations for Ahern Rentals, wrote: “Cessna was OK on the warranty, but every time we went in for warranty [work], they had to run the engines for its pre-work checklist and burn precious fuel. Not in for engine problems, might I add.”

Ken Hall, director of operations for Citation operator Ahern Rentals, wrote: “We have abandoned paper manuals and switched to electronic media (CD-ROM) for technical publications. The availability of technical publications on computer media reduces cost, facilitates easy mobility, and makes it very easy to search for information on a specific topic. Links to parts order forms are automatic. The electronic media technical publications from Cessna have achieved maturity. They are simple to use, very clear, complete and concise. Overall, they represent a terrific value.”

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The director of maintenance for a West Coast concern wrote: “Cessna technical manuals (maintenance) for the Citation S550 are too vague, not precise and definitely not corporate-jet caliber. Maybe the new aircraft have better manuals.”

Jay Veronko, a police pilot based in the Northeast, had this message for Eurocopter: “Please write tech manuals in English; do not [just] translate from French.”

The Boeing Business Jet, a newcomer to the survey, displaced Cessna for second place.

The director of maintenance for a Southeast-based flight department said: “Raytheon comes up short on clarity, and sometimes necessary information is difficult to find because it is not well covered in a particular chapter. Both [companies] have problems relaying procedures at the manual level, although Raytheon is definitely worse.”

Survey respondents were outspoken about the quality of the OEMs’ technical representatives. Ken Hall, director of operations with Ahern Rentals, wrote: “Our [Citation 525 and 560XL] technical reps have maintained a close relationship with our flight department. They visit our operation approximately every six months and have proved to be very knowledgeable and professional. Tech reps are available 24/7/365, and they have assisted in preventing schedule interruptions, even in remote areas.”

A Citation 560XL pilot for Pinnacle Aviation Management in Scottsdale, Ariz., commented: “Tech reps have been slightly disappointing. Our private maintenance staff for our aircraft often know more than our regional tech reps and do not call on them on a regular basis because they know that they won’t get the proper answer to their difficulty.”

The chief pilot for a West Coast-based financial institution said: “Citation X team doesn’t seem to have the depth of experience to respond quickly to questions. It needs to keep better database info for reference.”

Continued from page 28

Angelo Soto, director of maintenance for a large helicopter operator, had this to say about Eurocopter’s tech manuals: “AS 350 technical manuals are too complex. Need six books to do one thing.”

William Howell, director of aircraft maintenance for a financial institution, said: “Bombardier Learjet [manuals] are the worst when it comes to being interactive.”

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Daryn Zawitz, NetJets Citation 750 line captain, wrote that the tech manuals are “OK, I guess. Cessna seems to always be changing them, but maybe the trouble lies more with my company’s slowness in disseminating the information to the flight crews rather than any real trouble with the manuals.”

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Jay Veronko, a police pilot based in the Northeast, had this message for Eurocopter: “Please write tech manuals in English; do not [just] translate from French.”

Gary Mathees, chief of maintenance for a Midwest operator of the Falcon 900, commented: “Maintenance using the field CD-ROM method is much quicker than using a manual. Dassault needs to get in the service centers and double-check the accuracy of maintenance contents and procedures, and in many cases create proce-
enough referrals to other shop folks, an answer can usually be found.

The line captain for a food giant had this to say: “Just heard from a Cessna rep first time in five years. Gulfstream rep is great—he visits regularly.”

The director of maintenance for a Southeastern company commented: “Citation factory tech reps are pretty good but disconnected from the field. It seems they get trend information much later than the field reps. Raytheon tech support is slightly better. Neither is capable of 24/7, as advertised. Sometimes you get one that specializes in avionics answering the phone after hours when you need an airframe person.”

Russ Erickson, chief pilot for a West Coast Beech Premier I operation, commented: “The tech reps have been the best. They call me to check on the aircraft periodically.”

Craig Kinmon, director of maintenance for a Midwest firm that operates the Westwind Astra, wrote: “Gulfstream is the best. They go way over the top to find a solution to your problem.” But Daniel Carrigan, owner-operator of Danair, had this to say: “I think Gulfstream has orphaned the Westwind.”

Aircraft manager for a Midwest company: “Gulfstream tech rep Mark Solomon does an outstanding job.”

An aviation manager for international charter/management firm TAG Aviation: “Disappointed [with Bombardier]. We had a problem in Japan recently and tech rep was contacted. However, he had a trip out of the country in a couple of days and wouldn’t be able to help us. He didn’t offer any alternatives for assistance. This didn’t sit well with us or our owner, as he is ordering a new Global XRS. [We are] now wondering whether an airplane called “Global” can actually make it around the globe if manufacturer reps can’t assist us.”

Patrick Diet, pilot/manager for a Western-based Challenger 300 operator, commented: “John Stoller is the best field service rep I have ever met. He sets a new standard for all others.”

Roger Lipcamon, director of operations for an upper Midwest company that operates a Learjet, said that his field service rep is the “best I’ve seen in more than 20 years of flying.”

The manager of flight operations for a Learjet 60 operator commented: “We have some very good and knowledgeable tech reps to help us. For example, Bob Newhouse.” But an aircraft maintenance manager with the same company said: “Mostly helpful, but it’s frustrating to me that they [tech reps] don’t have a lot of documented history regarding operational problems with the Learjet 60.

“We call the help desk and it says, ‘Not better than the Air Frame last one before.’ We can’t be the only operator having these problems. There has to be a better way to collect information and have it available to the operators.”

Captain of a Falcon operation based in New England: “Dassault tech rep B. Curtis [provided] outstanding support.”

The director of maintenance for a Midwest company said: “Dassault Falcon Jet field service is quite simply top-notch. A direct reflection of all of the hard work John Loh has put into the Dassault field service organization.” [John Loh, previously] manager of field service, in May was named director of technical support for Dassault Falcon Jet—Ed.]

An aircraft technician for a Midwest-based Falcon operator wrote: “Charles Boler goes out of his way to offer as much assistance as needed to fix the problem.” Chief pilot Ephraim Ingals of a West Coast company: “Eurocopter reps are marginally more available than Turbomeca reps.”

The director of maintenance for a Canadian company had this to say about the overall reliability of the aircraft he operates: “All the types [we operate] work well, even the Global Express airplane. But the GEX interior is always breaking. We spend 75 percent of our working and repair time on interior squawks.”

C. Dauber, Challenger 601-3A captain for a Southeast operation: “Outstanding [reliability]. In more than 17 years with this airplane we have experienced about six delayed or canceled flights, none of them while on the road.”

Daryn Zawitz, a NetJets Citation X line captain, wrote: “Obviously you folks don’t have a lot of experience with the Citation X. Otherwise you’d have backup tickets booked on the airplanes for every flight.” He did not elaborate. However, the chief pilot for a financial institution that operates a Citation X said the airplane’s overall reliability is “very good. Have missed only about four flights in four years for maintenance. A few were delayed due to fuel.”

Paul Hansrote, a Citation Encore captain at an international charter/management operation, wrote: “We have experienced a large number of scrubbed trips for a new aircraft. Teething problems lasted well beyond the first 300 hours and first year of operation. Problem areas were seen in all the major systems. Quality was clearly not what it should be.”

The maintenance supervisor for a multinational charter/management company commented: “Falcon 200-F is reliable when it flies a lot, but has ‘issues’ intermittently when it sits. Getting concerned about having aircraft grounded for extended periods due to parts availability.” Capt. Jeff Tyler, who flies the Falcon 20 for USA Jet Airlines, said: “Reliability would be much better if there were parts available.”

Representative for a large charter/management company commented: “Falcon 900B dispatch reliability above 99 percent. Falcon 900EX dispatch reliability below 95 percent.”

A Canadian company that operates Falcons wrote: “[Our] Falcon 900B has been bulletproof with excellent reliability. [Our] Falcon 900EX has been mostly reliable but has experienced two nicad battery failures, engine carbon seal problems, including an engine failure related to seal problems. “The Honeywell electronics seem to still have bugs. The aircraft cabin temp control is unreliable and the cockpit temp control must sometimes be run in manual. We have experienced false aft compartment fire warnings. Dispatch reliability year to date is 92 percent. Our current and previous 900B models were always 99 percent or better.”

The pilot for a Northeast aircraft operation commented: “Dispatch reliability for the Gulfstream IV has been 99.7 percent.” The president and CEO of an aviation services company noted: “GIV-SP and GIV dispatch reliability over several companies operating these aircraft is excellent—99-plus percent.”

The aviation manager for a West Coast-based corporation said: “Gulfstream G200 reusability completely unacceptable. S/N 37 problems with Gulfstream originate from ‘walnut row.’ The maintenance folks are quite good.”

Large charter/management operation: “Global Express overall has been pretty reliable. Success of aircraft is largely due to our maintenance supervisor’s extensive knowledge of the aircraft. Would hate to rely solely on manufacturer for timely assistance and knowledge.”

A West Coast-based charter/management company had this to say about the aircraft in its fleet: “Global Express is getting better. I hear the later serial number aircraft are great. Falcons are very reliable. The 900 seems to have more small maintenance issues than the 2000. The 200 doesn’t break that often.”

A Hawker 1000 pilot for a Midwest flight department commented: “Fortunately it’s a Hawker and is built like a tank. Unfortunately when it breaks it’s hard to get fixed.”

The chief pilot for a Western company that operates a King Air 350 wrote that the overall reliability is “not good. Our airplane is only 18 months old and we’ve had seven fuel indicator failures, numerous avionics issues and approximately 400 to 500 leaking rivets that caused our paint to pop off at that many separate rivet locations. We love the safety and the capability of the King Air 350, but Raytheon has some very serious quality-control issues that need to be addressed immediately.”

The senior pilot for a Midwest firm noted: “Unlike the Gulfstream IV, our Learjet 60s have reliable dispatch rate, with nothing major keeping us from taking a flight. Citation has kept us home only two or three times for malfunctions over a four-year period.”

A chief pilot who flies a Learjet 25G said: “Fortunately the Learjet is as reliable as Bombardier/Learjet [support] is unreliable.”

The aircraft maintenance manager for a large Midwest company commented: “We have operated two Learjet 60s for close to five years. The aircraft reliability has been very disappointing and frustrating at times. The basic design of the aircraft creates situations that make maintenance difficult and time consuming. When you couple the...