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ACM UPDATE
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The ACM Update & Calendar (and previous issues) are also available for viewing on the ACM website.

Welcome New ACM Member

Precision Threaded Products Inc.

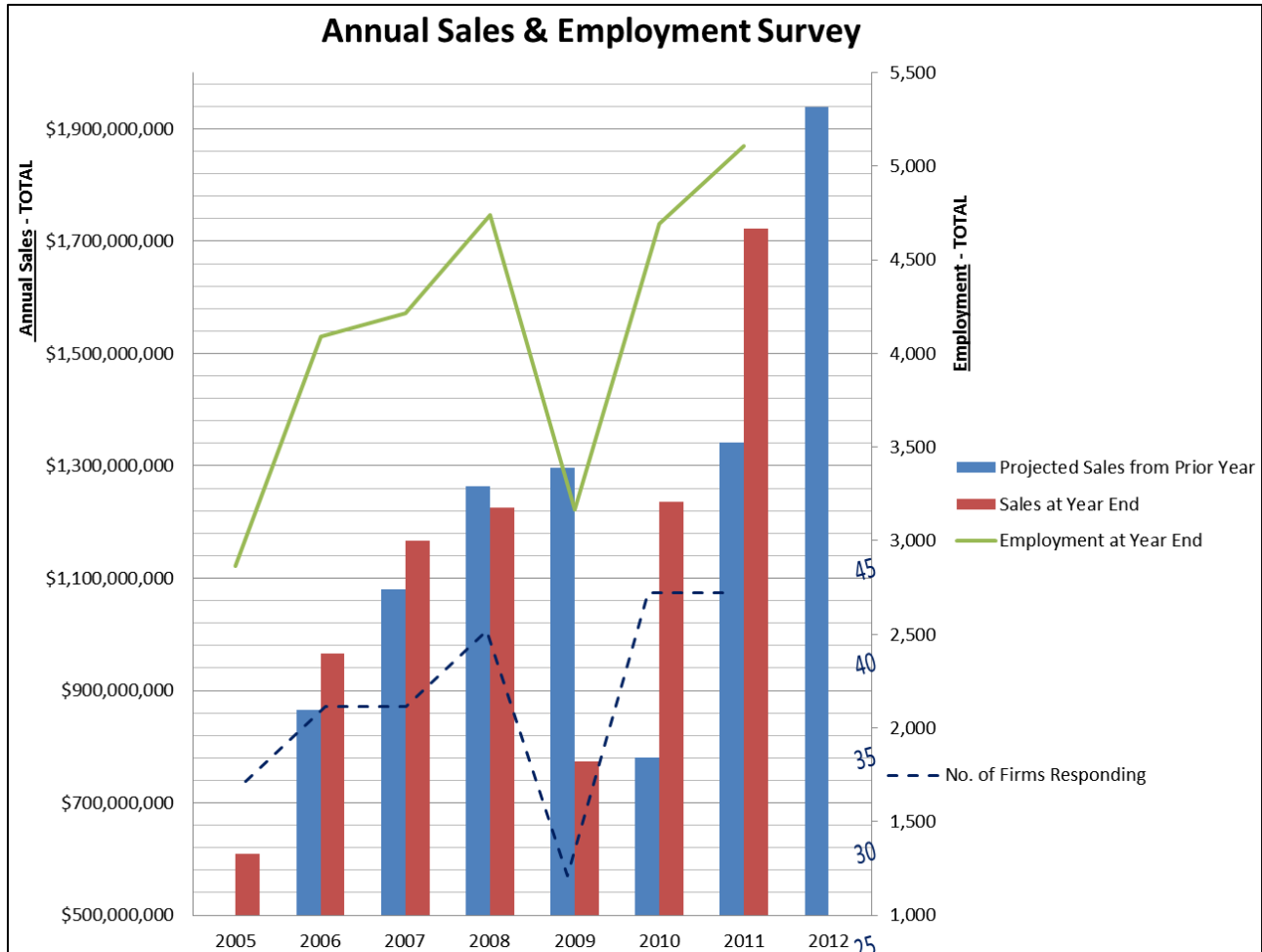
220 Business Park Road

Bristol, CT 06010

www.ptp-inc.com

Paul Nichols, President

Business Development



- ACM conducted its annual year-end survey of sales, market and employment comparing results at the end of CY2011 with projections for CY2012. Please see the previous page for the summary graphic. ACM members firms are reporting strong and continuing projections for growth and as a group, represent a significant element in Connecticut's economy. Forty-four member firms participated (44 firms also responded in CY2010). In summary, CY2011 sales were indicated to be in excess of \$1.72B, up from the CY2010 estimate of \$1.34B; the projection for sales for CY2012 is \$1.94B. The breakdown of market changed in favor of commercial aerospace, estimated at ~43% of annual sales, with military aerospace at ~36%, ground turbine at ~10% and the balance (other markets) of ~10%. The CY2010 market estimate had reflected a 36% commercial aerospace share and 43% military share. Employment at the end of CY2011 was estimated at 5100 persons and projected to increase to over 5,400 by the end of CY2012.
- **Connecticut's AEROSPACE ALLEY!**, ACM's marketing video, is available on the homepage of ACM website, www.aerospacecomponents.org. Please take the time to show your Customers this message as you meet with them and encourage them to increase their business base among the ACM firms. In addition to this internet link, jacketed DVD copies of the video are available at no cost to ACM members; email the ACM office at alsamuel@acm-ct.org to request copies be mailed to your office.
- The next meeting of the Business Development Team will take place on Wednesday, February 1st at 8:15am CERC in Rocky Hill.

Farnborough Air Show - July 9-13, 2012
Farnborough, UK

The State of Connecticut Department of Economic and Community Development, the Connecticut Center for Advanced Technology and Connecticut Light & Power invites Connecticut aerospace manufacturers to participate in promoting our state's world-class aerospace industry at the upcoming 2012 Farnborough Air Show in Farnborough, UK on July 9-13, 2012. Exhibit space is available on a first-come, first-served basis. A limited number of spots remain available; the cost per exhibit is \$10,000.

WHAT YOU GET

- Uniquely designed space in the 27'x 36' State of Connecticut exhibit
- Prime location in the U.S. Pavilion, adjacent to the exhibitor lounge
- Space to display graphics and literature with other Connecticut companies
- Week-long exhibitor pass and daily guest passes
- Access to the exhibitor lounge and meeting rooms
- Company listed in show directories
- Connecticut Reception on July 11, 2012

Questions; contact Wayne Sumple at (860) 282-4222.

To register, go to www.eiseverywhere.com/ereg/index.php?eventid=27401&



Leap orders prominent in CFM's 2011 results



Orders for CFM Leap engine family accounted for a large portion of the manufacturer's total \$51.7 billion in engine sales for 2011.

CFM collected \$36.7 billion in Leap orders last year - 930 Leap 1A engines for the A320neo aircraft, which CFM said accounts for 53% of A320neo orders, and 1,896 Leap 1B engines for the Boeing 737 Max. CFM retained its exclusivity as the lone engine supplier for the 737 Max, and competes with the Pratt & Whitney 1100G engines.

CFM also listed nine unnamed customers in its year-end tally for Leap 1B powerplants, joining four customers that have publicly committed to the engine - American, Aviation Capital Group, Lion Air and launch customer Southwest Airlines. Eight customers have committed to the Leap 1A powering the A320neo - AirAsia, CIT Aerospace, Garuda, GECAS, ILFC, Republic Airways Holdings, SAS and launch customer Virgin America. CFM also secured orders for 230 engines for the Comac C919.

During 2011 CFM garnered orders for 394 CFM56-5B engines and 1,012 for the -7B variant.

CFM achieved its previously announced target of 1,300 engine deliveries in 2011, a 4% increase over the 1,250 delivered in 2010. CFM remains bullish on bolstering its Leap customer portfolio this year. "We are expecting additional A320neo, 737 Max and C919 announcements in the next couple of months, so 2012 is already off to a very good start," said company CEO Jean-Paul Ebanga.

Source: Flightglobal



Rolls-Royce

Save the Date

For the

Rolls-Royce Small Business Conference

Thursday April 26 – Friday April 27, 2012 - Indianapolis, IN

This two-day, cross sector event includes a workshop, "Doing Business with Rolls-Royce," as well as Matchmaking Madness (business speed dating) with Rolls-Royce and other local area Prime Contractors to the US Government.

Registration for this event is FREE! Event details will be posted in the Calendar of Events section of <http://www.rrcsupplierdiversity.com> by the end of January 2012.

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GTP 9469 (12/11)



Geared Turbofan Orders Generating Wave Of Work For Pratt Suppliers In State

By MARA LEE maralee@courant.com The Hartford Courant January 27, 2012

The first delivery of an Airbus narrow-body plane with a Pratt & Whitney engine on it is nearly four years away, but the surge in manufacturing parts work that's coming from the massive numbers of geared turbofan engines in the pipeline starts much sooner.

That's good news for Pratt's suppliers in Connecticut. The work will support hundreds of jobs in the state, though no one has a count of just how many people the Pratt subcontractors will hire. Connecticut's manufacturing employment is still down by about 25,000 from its pre-recession level in early 2007, but the geared turbofan ramp-up is considered a key part of the sector's recovery.

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Progressive Manufacturing

- The Progressive Manufacturing Team met at Birken Manufacturing (Bloomfield) on January 10th.

Al Samuel opened this meeting, the best attended monthly meeting in a significant time, advising that longtime leader Bob Castonguay, CI Manager at Trumpf Inc, had requested to resign his position; the Team thanked Bob for his great service and dedication to the Team's activities. Al next announced Eric Schneider, CI manager at Birken Mfg, had volunteered to assume leadership for our Team.

The topic of this meeting, which attracted the interest of so many members, was "*How to utilize inspection technology, solid models, CMM's and automatic IMS generation to eliminate waste and gain efficiencies in the First Article Inspection process*"; Eric Schneider facilitated the presentations and discussion. Members presented their approaches to this process, sharing their issues and experiences:

Pete Holden, Quality Manager at Pegasus Mfg (Middletown) presented their journey from the use of manual Excel and Word based forms, used to record first article inspection data, to the introduction of *InspectionXpert* software. *InspectionXpert* is first article inspection reporting software that automates the creation of ballooned inspection prints and AS9102, PPAP, first article and in-process inspection reports. Pete indicated the program will work with many drawing formats including PDF, TIFF and DWG and is capable of interfacing directly with Solidworks, Solidedge and AutoCAD. Ballooning of key characteristics is performed automatically off digital models, and manually if using a pdf file. The software is still new to Pegasus and inspectors are learning its value. Pete noted training time is initially 2-3 hours, however additional time is required to really become comfortable with the program; those who didn't use it regularly required secondary training periods. Pete believes *InspectionXpert* will eventually save 1/3 to 1/2 the time normally spent by an inspector in preparing the FAIR documents, a significant savings! Pegasus currently uses manually methods in reporting older part numbers (existing work) but is incorporating *InspectionXpert* for all new work. The program was purchased by Pegasus; additional information is available at www.inspectionxpert.com.

Birken's Carlene McGann discussed a similar software system, *VisualFair*, which Birken is now using to automate the process of ballooning engineering drawings for first article inspection. Carlene pointed out this software has an ancillary app allowing CMM data to be imported. She showed a brief video demonstrating the process of ballooning the drawing and another video showing CMM data, using Zeiss' Calypso software, directly populating *VisualFair* from the solid model of a part undergoing CMM inspection. Carlene concurred with Pete Holden's experience that inspectors become rusty when not using this software on a regular basis. Information regarding *VisualFair* may be obtained at [www.ipi-solutions.co.uk/Software/Visual-FAIR-\(1\).aspx](http://www.ipi-solutions.co.uk/Software/Visual-FAIR-(1).aspx).

Adchem Mfg Technologies' Michael Polo and Roman Gorski shared their experience in the introduction of white light scanning equipment, recently developed at CCAT (E.Hartford), into their inspection system. This system is being used by Adchem for dimensional inspection of complex sheet metal parts. The part being inspected is located on a base plate which also contains fixed calibrated balls mounted on posts. The scanning equipment calibrates off the balls, and the part is rotated to create a three dimensional digital model; dimensional capability was said to be +/- .0005". The acquired data is then populated into AS9201 forms for the FAIR, using embedded *Geomagic* software. The next evolution of this process will be automated ballooning off the model. A basic requirement of this white light system is to (spray) coat the entire surface of the part being inspected, a process that does not appear to be tedious. Again, operator skill was indicated as an issue and Adchem advised it would be a benefit to dedicate a person having a "3-D model mentality" to its operation.

This meeting drew the attention of many members and again demonstrated the value in sharing, and learning from, our common experiences. Eric Schneider is making the development of meaningful meeting topics one of his key tasks as our new Team leader; please help Eric by suggesting topics of interest to you, or topics who wish to share and discuss with others in our Team. Please contact Eric

Schneider at Birken Mfg at eschneider@birken.net or (860) 761-6471; alternatively, drop an email with your suggestion to the ACM Office at alsamuel@acm-ct.org.

- The next meeting of the Progressive Manufacturing Team will take place at 8:00am on Feb 16th at the office of Connstep (and ACM) in Rocky Hill.

This meeting will feature a topic everyone is involved with, being a C.I. Manager. Are you the CI leader in your company? What does your job description and day/week look like? The Team will have an informal discussion to help those in this role share best practices on everything from 5S through Kaizen through support of difficult Root Cause and Corrective Action projects.

Please plan to attend "CI Manager 101" and contact Eric Schneider in advance if you wish to be a participant in the discussion (contact info, above).

Workforce Development

- The next meeting of the WorkForce Development Team will be held at ATI Ladish Machining in South Windsor at 8:00am on Tuesday, February 7th. Please be sure to attend this meeting.

- ACM training courses are beginning their "spring" semester. Kamatics Inc (Bloomfield) is conducting a significant training program in Blueprint Reading, Shop Math and GD&T for their employees. A session of GD&T will be open to all ACM members beginning on March 27th at CBS Mfg in East Granby (subsequent email notices will request registration).

Course	Date (Start)	No. of Days	Date (End)	Host Company or Location	Participants	No. of Attendees
BluePrint Reading	1/10/2012	10	3/20/2011	Kamatics	Kamatics	15
Shop Math Level 1	3/27/2011	9	5/22/2011	Kamatics	Kamatics	15
GD&T	late February	10	TBD	Kamatics	Kamatics	
GD&T	late February	10	TBD	Kamatics	Kamatics	
GD&T	3/27/2012	10	5/29/2012	CBS		

Please advise the ACM Office of any additional training courses you suggest be organized to meet your employees' needs.

Consolidated Purchasing

- The next meeting of the Purchasing Team will take place on Thursday, February 2nd at 8:00am at Horst Engineering, East Hartford. The meeting will feature a presentation by Horst Engineering on their fastener / thread rolling capabilities; please be sure to attend.

- Suppliers having Agreements with ACM are:

	<u>Supplier:</u>	<u>Key Contact:</u>	<u>Telephone:</u>
Shop Supplies, Abrasives, Cutting Tools, etc	Turtle & Hughes	Dave Howard	203-497-1555
Raw Materials: Nickel, Cobalt, Titanium – Sheet, Plate & Bar Stock	Aerodyne Alloys	Kirk Smallidge	860-508-1271

News from ACM Members

Please forward significant company news and announcements to Allen Samuel at alsamuel@acm-ct.org for posting on the ACM website and publication in the UPDATE



On growth track, ACM member Atlantic Fasteners hires two

West Springfield, MA, Jan. 11, 2012 - Industrial wholesaler Atlantic Fasteners has hired a customer service pro and a director of quality to handle new business.

Tony Orvis, a 20-year expert in customer service, has joined the firm's industrial fastener division. Orvis, a former operations manager for a Connecticut fastener supplier, also has extensive background in sourcing fasteners and "c" items.

Bruce Bonzey has taken over as director of quality as the department expands. His diverse background includes stints at manufacturers Barry Controls, Standard Thomson and Cole Hersee, where he spent 10 years as director of quality.

Commenting on the additions, Atlantic president Tony Peterson notes, "As a 100% employee-owned company, we're proud of our success in this stagnant economy and are preparing for robust growth in '12, as we pursue three major initiatives."

Atlantic Fasteners is an ISO 9001:2008 and AS9120 certified industrial and aerospace fastener wholesaler. The 31 year old firm specializes in vendor managed inventory programs at point of use, technical troubleshooting, and design help.



January 30, 2012

Sterling Engineering Corporation is pleased to announce the appointment of Chris Haddad to the position of General Manager, effective today.

Chris comes to Sterling most recently from Goodrich Aerospace and brings with him progressive aerospace manufacturing experience and a great lean background. You may reach him at:

Christopher Haddad, General Manager

Telephone: 860-379-3366 EXT 106

chaddad@sterlingeng.com

I am confident that you will enjoy working with Chris in the years ahead.

John Lavieri, President



For One Small Manufacturer, Trade Mission Pays Off Fast

By MARA LEE, maralee@courant.com The Hartford Courant January 11, 2012

AeroCision, a small aerospace engine parts manufacturer in Chester, increased its export sales by \$900,000 in 2011, making up 60 percent of its revenue growth for the year.

Wednesday, CEO Andrew Gibson thanked Rep. Joseph Courtney, D-2nd District and Anne Evans, director of the U.S. Department of Commerce's regional office, for their roles in making it happen.

Courtney, Evans and representatives from nine Connecticut manufacturers — including AeroCision — traveled to England last April, in the hopes of selling more Connecticut products.

AeroCision, formerly Pye & Hogan of Old Saybrook, already had a British company — Rolls-Royce — as its largest customer, but nearly all of that relationship was selling to the jet engine maker's Indiana operation. Gibson said Rolls' newer platforms are being manufactured in the United Kingdom, Germany and Singapore, so he wanted to get onto those engines.

As a result of the Congressman's trip, he was able to win business in parts for the Trent engine that's used on the new Boeing Dreamliner plane.

Gibson said the trade mission was hugely important in winning the UK business, and he projects the company will have \$3 million in exports in 2012 — up from just \$200,000 in 2010.

Overall, revenue rose 20 percent from 2010 to 2011, and the company expects the same growth rate in 2012.

"It added a lot of prestige to our brand," Gibson said. "It was a combination of our reputation working with the Indiana business, and demonstrating to them that we really, really did want to export."

Gibson bought the former Pye & Hogan factory four years ago with a partner, intending to turn it around and move on. But liked it so much he decided to stay on. At that time, the factory was in Old Saybrook and had about 85 workers; now it's in Chester, and has 62, with two more coming on this month.

"We had to shrink the business first before we could grow it," Gibson said. Since the change in ownership, AeroCision has shifted to higher-value parts, four times as costly as the kinds of parts Pye & Hogan made.

"Because we're in the most expensive manufacturing area in the world, other than Norway, we have to continue to add value to grow the business," Gibson said.

AeroCision hired seven people within the last year, including Michael Perron, 21, a lathe machinist. Perron and all other workers in the factory listened to Courtney praise their CEO. "It's a big deal," he said.

Courtney said he hadn't expected the trade mission to bear fruit this quickly, or at such a high dollar amount. Two other companies on the trip also landed sales with Rolls-Royce.

"Having been on three of these trips, there is nobody who has been on these trips who extracted every drop of being on that trip like your guy, Andrew Gibson," he told the workers.

They laughed knowingly, and clapped.

After the ceremony, David East, 58, who operates a computer-controlled grinder, said the change in ownership "narrowed it down to the ones who really produce. I'm very proud to be part of this company. It's a whole different culture."

East, who has been with the company seven years, said the ceremony, which included a certificate of export achievement from the Department of Commerce, was terrific.

"It shows what we can accomplish in a very short period of time."

Geared Turbofan Orders Generating Wave Of Work For Pratt Suppliers In State

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At **Whitcraft Group**, CEO Colin Cooper and President Jeff Paul are in nearly daily contact with Pratt about the logistics of the ramp-up, which Pratt calls "their mountain," or sometimes "the cliff," suppliers said.

Pratt is pinning great hopes on the geared turbofan, branded *PurePower*, which uses a revolutionary design in which different parts of the engine rotate at different speeds for higher efficiency. The company declined to discuss how its increased business would affect suppliers.

A source at Pratt who was not authorized to talk to the media confirmed that Connecticut suppliers will see a surge in business as long as the expected volumes hold up.

Cooper and Paul, both Pratt alumni, have been buying up Connecticut aerospace factories since they founded Whitcraft, with the latest purchase — of Farmington's Dell Manufacturing — coming in December. This year, they project the company will have \$100 million in sales. Whitcraft has 450 employees and about 25 temps across three locations, including Plainville and the Eastford headquarters.

They have models of how many hours each part would take at the volumes Pratt is planning for, on each piece of equipment, so they can plan purchases of equipment such as milling machines and five-axis laser cutting machines. "The biggest challenge will be training a workforce," said Paul, especially as sheet metal workers are not as plentiful as machinists. The company has a yearlong apprentice program for new sheet metal workers. "We're very excited. We're ready," said Paul. "We're in a very good place with preparation."

Lining Up The Parts

For smaller Connecticut aerospace players with less access to capital, the need to ramp up is both thrilling and unnerving.

Adchem Manufacturing is going to have to borrow to buy a million dollars' worth of equipment to meet the demand, a substantial sum for the Manchester company, which has about \$6 million a year in revenue.

In 2009, AdChem found it took so long to get a loan approval, it couldn't buy a water cutting machine required for \$1 million in annual parts work for Pratt. The job went to South Carolina instead. And President Michael Polo said AdChem can train only four entry-level workers at a time, since there are just 46 full-time and six part-time workers at the Manchester aerospace factory. By the second half of this year, AdChem will need to start hiring to prepare for more volume. Polo expects to need 10 employees by 2013. "My financial people keep pushing back," Polo said. "You can't wait."

Pratt is willing to help its small suppliers by paying for tooling for new parts, but Polo said that's dangerous. "Then they own the tool, and can move it," he said. His company has lost some Hamilton Sundstrand work to China and General Electric work to India — though he says about half the time it comes back when cost savings or reliability are lacking.

Pratt is working to develop a network of overseas subcontractors, including India, for parts for the geared turbofan and other programs, the Pratt source said. Until now, nearly all of the parts produced in lower-cost countries like Poland, China and Turkey have been at Pratt-owned factories. But the boost in work for Connecticut subcontractors will happen despite that effort, he said.

Pratt released a written statement that said: "We are confident that we have a supply chain strategy that best structures us to succeed with both our existing customers and the significant new work we have won."

Despite all the political attention on securing work for Pratt on the F-35 Joint Strike Fighter, the volume of parts for that military engine, the F135, is not a major factor in the surge of business, because the volume of purchases from the Pentagon is expected to stay low for years to come, as engineers continue to work out the kinks of the plane.

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Geared Turbofan Orders Generating Wave Of Work For Pratt Suppliers In State

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Whitcraft has a fair amount of content on the F135 engine, but notes that the build rates haven't gone up. "We've been three years away from prosperity on that, and we're still three years away," Cooper said. "A perpetual three years," Paul agreed, chuckling.

'A Happy Ending'

The members of Pratt's supply chain do have some caution in responding to the Pratt projections. Although they're already producing parts for test engines for the C Series, which goes into service next year, for Mitsubishi, and the first prototypes for Airbus, that doesn't mean they will win the contracts for the parts when the engines are in full production. Some of the work will go to Germany's MTU Aero Engines, Kawasaki or Chengdu. The German parts manufacturer will get 18 percent of the work on the Airbus engine, and the Japanese industrial consortium will have 23 percent of the work on that version of the PurePower. Both also have revenue and risk sharing on the C Series.

About 25 to 30 percent of Airbus engines will be assembled in Germany; none is expected to be assembled in Connecticut, although Pratt has not announced a decision about final assembly in this state.

Neal Bouthot, CEO of the **Beacon** Group, which includes two factories, one in Bloomfield, and a **November acquisition (TECT Power) of a Newington factory**, is doing prototype parts for geared turbofan engines, too.

"We don't know what the future plans for these parts are," he said. "We hope we can participate in some way." After 27 years in aerospace manufacturing, Bouthot watches Pratt's "mountain" presentations with a bit of skepticism. "What really matters is when they provide you with a request for quotation and you start having real discussions," he said. But even if East Hartford, Germany and Japan get the lion's share of parts on the PurePower engines, Bouthot still expects to sell far more parts in the next five years. The two factories in the **Beacon** Group had combined sales of \$30 million in 2011, and he's projecting \$35 million this year.

He thinks **Beacon's** business surge will come as a result of Pratt and its partners in the International Aero Engines consortium needing to move parts for the V2500 engine out to the supply chain, so they can free up resources for the PurePower line. The V2500 engine is now on Airbus planes, and most buyers will switch over to the PurePower once it's available. But engines stay on wing for two decades, and will need spare parts for that long. "I think our work is going to come in legacy engines. It's not necessarily the latest platforms. That work normally goes to risk and revenue partners," Bouthot said.

And Bouthot said Beacon will benefit in the same way as GE develops the Leap-X, the competitor engine to the geared turbofan. "With GE, the legacy work is not bad; their legacy work is high volume," Bouthot said.

Because most of the good-size Connecticut aerospace companies have diversified their customer base, they will be able to counteract GE and Pratt's tendencies to push risk onto suppliers and reserve profit for themselves. If a part is not profitable enough at the price the company is demanding, there will be enough work from a competitor to turn it down.

Pratt's workflow will have no gap over the next several years, aerospace analyst Nicholas Heymann projects. There were 22 percent more sales of narrow-body planes in 2011 than there were in 2010. And Pratt's share of those sales went from 10 percent to about 17 percent, Heymann said. By the time Pratt works through those deliveries, he expects another surge in orders from India and China. As standards of living increase in those countries, and in Brazil and the Middle East, more people fly, and the airlines need more planes. Several large American carriers are also at a point where they need to replace old fleets. Heymann believes that Airbus and Bombardier planes in this class will sell much better than the re-engined Boeing. "Because of the persistence of Pratt and senior management, today, Heymann said, "Pratt basically owns the future of the narrow-body segment of the market."