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ACM UPDATE

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Aerospace Components Manufacturers, Inc.
P.O. Box 736, 1090 Elm Street Rocky Hill, CT 06067

(860) 513-3205 * FAX (860) 529-5001

www.aerospacecomponents.org

E-mail: alsamuel@acm-ct.org

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

Welcome New ACM Member

AGC Incorporated

106 Evansville Avenue
Meriden, CT 06451
203-639-7125

www.agcincorporated.com

Bruce Andrews, CEO

Business Development

- The Business Development Team met on January 27th. Team Leader Bruce Fiedorowicz introduced ACM's newest member firm, AGC Incorporated (Meriden, CT); Bruce Andrews, AGC's CEO provided the Team with an overview of the firm.

This Team meeting was dedicated to a briefing on the *HondaJet* Program and its *HF120* turbofan engine. Honda Aero's Edward Moore, Purchasing Coordinator and Jack Whipple, Manufacturing Engineer introduced this new business opportunity to our members.

Highlights of Mr. Moore's briefing on the *HondaJet / HF120* Program:

- Honda is the world's largest manufacturer of automotive, motorcycle, marine and specialty engines.
- Research on the *HondaJet* program, both engine and airframe, began in Japan in 1986.
- The *HF120* engine is a 2000lb thrust turbofan, approx 22" diam x 44" long, weighing ~300lbs. It is described as having a high thrust to weight ratio and reduced fuel burn; with a planned time between overhaul of 5,000 hours, it will be capable of staying on-wing approx 40% longer than other business jet engines.



Bruce Fiedorowicz (Volvo Aero CT), ACM's Business Development Team Leader, welcomed members to a meeting attended by 29 firms

-In 2004, Honda Aero Inc. was formed by the Honda Corporation for the purpose of providing business, management, and procurement support along with a factory for production assembly of the *HF120* engine. Honda Aero Inc. will become the holder of the Production Certificate.

-Also in 2004, Honda Aero Inc. and General Electric Aviation formed “*GE Honda Aero Engines*”, a 50-50% partnership in the development of engines in the 1000-1350lb thrust class and the holder of the *HF120* engine’s Type Certificate.

-Honda Corporation retains ownership of the design, and has continuing design responsibility for the *HF120*, while GE provides mentoring for design producibility, testing and FAA certification. All production engineering drawings will retain GE material and process specs.

-Another firm, Honda Aircraft Co. has responsibility for the design and fabrication of the *HondaJet*’s airframe; Honda Aero Inc. is a supplier to the Honda Aircraft Co.

-Development engine procurement of the *HF120* is split, with Honda Aero responsible for 60% and GE the other 40%. In 2011-12, all procurement will become the responsibility of Honda Aero. Engine assembly will then transition from GE Lynn to Honda Aero, which recently built a headquarters and engine assembly facility in Burlington, NC.

-Procurement for development engines is based on the GE approved supplier base, although some Honda Aero suppliers are involved. If a supplier has GE approval, Honda Aero can engage them immediately; if not on the current GE supplier list, new suppliers must first become GE approved. Honda Aero is looking to develop their own supplier base to transition from the GE approved supplier base for production engines.

-Engine block-changes are planned and will create entry gates for new suppliers to become approved, in time for assembly of their components onto certification engines.

-Marketing forecasts indicate a growth in the Business Jet market. Demand is rising in the VLJ (Very Light Jet) sector, driven by security, air taxi and fractional aircraft ownership businesses. The *HondaJet* competes with the *Cessna Mustang*, *Embraer Phenom 100* and the *Eclipse 500* (which is currently on production hold).

-Current applications for the *HF120* are the *HondaJet* and Spectrum Aeronautical LLC’s *S-40 Freedom*, a larger business aircraft having a stand-up size cabin.

-Following FAA certification in CY2011, annual estimates for *HF120* engine production, combining both *HondaJet* and *Spectrum Freedom* requirements, are 180 engines in CY2012, 350 in CY2012, and 450 in CY2014 & CY2015.



GE-Honda Aero Engines’
HF120 Turbofan Engine



For additional information, members may contact:

Edward Moore
Purchasing Coordinator
Honda Aero Inc.
2989 Tucker Street
Burlington, NC 27215
336-513-6649
edward_moore@honda-aero.com

Jack Whipple
Staff Engineer
Honda Aero Inc.
2989 Tucker Street
Burlington, NC 27215
336-226-2146
jack_whipple@honda-aero.com

Special thanks to Volvo Aero’s Bruce Fiedorowicz for organizing this new business opportunity for ACM’s members.



Honda Aero's Edward Moore (left), Purchasing Coordinator, and Jack Whipple (right), Staff Engineer, brief ACM members on the HF120 engine program



Spectrum Aeronautical LLC
S-40 Freedom
powered by HF120 turboprop engines
(above)



Honda Aircraft Co.
HondaJet (left and below)



- In a follow-on action to the Team's October 2009 meeting, members met on January 13th to discuss their knowledge of Export Control requirements. The discussion began with each attendee briefly addressing their understanding, or lack thereof, of export control requirements. The matter of ITAR vs. EAR was an important issue and all members agreed on the need to further their understanding. Attendees pointed out this is not a matter of compliance, rather adherence to law; they stressed the need to establish a program, yet to be pragmatic in how it fits within the scope of your firm. David Harris, Kaman Corporation's Manager of Export and Trade Compliance, attended and was extremely helpful in guiding the conversation. David was kind enough to volunteer to conduct a follow on meeting and provide a beginning overview.

The next Export Control Information meeting, featuring David Harris "Introduction to Export Control" will take place on Tuesday, February 9th at 8:00am at Connstep, Rocky Hill --- member's RSVPs are appreciated.

Additionally, ACM has received (see excerpts, below) a copy of an Export Control webinar provided by the consulting firm, *Export Solutions* (Cincinnati, OH). The file is available for viewing, or download, from the ACM website library; go to Members Only, Business Development and see: [Export Control Webinar Slides 9-09-09.pdf](#).

What is an export?

Exports can be ...

- **physical** (sending a part to a foreign country or person)
- **aural or verbal** (telling someone information about a controlled part)
- **visual** (a foreign person sees controlled information – even if they see it on your laptop in a public place)
- **Any item** sent from the United States to a foreign destination (company or person) is an export. All items and articles leaving the United States are exports and, therefore, may be subject to controls and restrictions.
- Items include **hardware** (parts, materials, sub assemblies), **information** (drawings, specifications, test data, calculations) and **technologies** (e.g.. composites)

Think About Your Answers

- Are you ready to do something about export control compliance **today**?
- How much **risk** of a violation and resultant penalties are you willing to continue taking?
- Are you **willing** to fix it? Show due diligence? Minimize your risk?
- Are you ready to position your company for **growth** going forward?

Next Steps

- **Learn More**
 - Discover how your business is affected
 - Find out your vulnerability to violations
- **Register with the DDTC**
 - If you work with defense products or provide defense services
- **Evaluate Past and Current Exports**
 - Voluntarily disclose if applicable
- **Develop and Implement a Compliance System**
- **Train Employees**
- **Market Your System**

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- The next Business Development Team meeting will be held on Wednesday, February 24, 2010 at 8:15am at the Trumpf Customer and Development Center in Farmington, CT. This meeting will feature guest speaker, Mr. Mikael Sandgren, Purchasing Director of Components at Volvo Aero Corporation (Sweden). Please be sure to attend this special meeting and RSVP to the email notice.

Progressive Manufacturing

- The Progressive Manufacturing Team met on January 21st at Birken Manufacturing, Bloomfield, to continue discussion on the Team's prior month's meeting topic, *Visual Management*.

Attendees discussed their approach to data reporting and the visual presentation of tracked data.

-Charts are an easy way for employees to understand what is happening; it is important for employees to understand *what* the chart is presenting.

-Most attendees addressed their use of visuals in reporting Quality and Schedule performance. Customer based matrices are often used, however one firm spoke of developing and posting their own performance criteria (sales vs. goal, on time delivery vs. goal, profitability vs. goal) and using these metrics to subsequently determine employee incentive bonus awards. It was noted the importance of picking the proper metric to establish employee bonuses, as a metric will change the behavior of employees!

-Other visuals reported being tracked include electrical and gas utility usage and matrices of employee vs. skills training.

-Attendees reported some rather unique formats for visual presentations. One firm provides performance metrics on a TV screen set up in the employee cafeteria. Another firm has set up one of their manufacturing departments to automatically report inventory transactions vs. schedule, displayed on a live webpage and making this webpage accessible both inside the firm and to its customers. The most unique visual presentation described was a fish tank set up in front of each manufacturing cell; the tank contains scrap parts, with a dollar value for the scrap posted on the tank. The fish tank is emptied monthly during a Management Team review with the cell's employees.

This Team meeting again provided attendees with a great opportunity to share best practices and experiences; firms not yet providing visuals on their shop floor had the opportunity to understand what similar firms were adopting.

Visual Management also serves an important role in Equipment Maintenance. Our next Team meeting will continue this subject with a presentation by John Kravontka on "Equipment and Maintenance Measures Leading to Reliable Equipment".

- The next Progressive Manufacturing Team meeting will take place on Friday, February 19th at 8:00am at Fuss & O'Neill Manufacturing Solutions in Manchester. ACM member John Kravontka, President of F&O'N Mfg Solutions, will present "**Equipment Visuals / Maintenance Measures Leading to Reliable Equipment**". John is a recognized global expert on TPM; please be sure to attend this informative meeting.

A Message from Jim Womack of the Lean Enterprise Institute commenting on "Beyond Toyota"

Fifteen years ago, when Dan Jones and I wrote an article for the Harvard Business Review to launch [*Lean Thinking*](#), the editors insisted on the title "Beyond Toyota". I found this exasperating because it implied we were somehow going beyond Toyota's discoveries about the best methods for creating maximum value with minimum waste. In fact, the article was simply the story of one organization -- Lantech, the American stretch wrapper company -- applying Toyota techniques in a low-volume, high-variety industry. Lantech had introduced Toyota's proven methods in a different type of business rather than going beyond Toyota in concept or methods. In the end, Dan and I agreed to the title and I just hoped we would be forgiven back in Toyota City for an apparent act of hubris.

Now, fifteen years later, I'm feeling that we all, even including Toyota, need to go beyond Toyota. But this is for a different reason. Lean methods for product development, fulfillment from order to delivery,

--continued on Page 8--

Workforce Development

- The WorkForce Development Team met at Kaman Precision Products on January 19th. Team discussion regarding the building of relationships with local middle and high schools continued; members are active, enthusiastic, yet we need more firms to engage.

What can you do to become active??

-Contact your local schools and offer to make ACM's Career Opportunities presentation to students, teachers and parents. This presentation is available on the ACM website in several customizable formats; go to Members Only, WorkForce Development and download [ACM Career Oppty Presentation March 09](#) in either a PowerPoint or .pdf file format. Not sure, or uncomfortable with doing this?? Contact the ACM Office to request simple training from another ACM member having already made this presentation.

-Invite school groups to visit and tour through your firm; conduct an Open House for school groups and parents; invite individual students to job shadow their specific career interest.

-Create positions for summer internships.

-Donate scrap raw materials and/or cutting tools, inspection tools and obsolete equipment to schools having manufacturing training programs.

-Attend WorkForce Team meetings and become an active participant in the planning of this important activity to create a pipeline of young and interested employees in the many job categories of our member firms.

Kaman Precision Products' Rick DeNicolo briefed the meeting's attendees on a very popular and successful program, "Daughters and Sons" Day, which this firm has conducted over the past eight years. Typically held in April to coordinate with school "spring break", employee's children and grandchildren are invited to spend a day visiting, learning firsthand about the variety of careers available and having an opportunity to see Dad or Mom at work. "Daughters and Sons" Day is both educational and fun for the children, whose age range from seven to eighteen (grades 3 thru 12). This program is enthusiastically supported by volunteers at Kaman Precision Products and becomes a special day and an effective morale booster. Want to learn more about how to arrange a "Daughters and Sons" Day at your firm?? Contacts at Kaman are Rick DeNicolo at (Richard.Denicolo@kaman.com) or Dave Oliveria (dave.oliveria@kaman.com). Additionally, Rick advised checking the website of the national organization, "Take Our Daughters And Sons To Work Foundation", for information, planning assistance and great gifts to give the children; see www.daughtersandsonstowork.org

Team members also discussed ACM's training program for incumbent workers. This is the best time of year to begin a course which will typically be run one day per week, on consecutive weeks, from 3:00-5:00pm. Need to send students to BluePrint Reading, Geometric Tolerancing, Shop Math, SPC (Statistical Process Control), or First Line Supervisor's Training?? Please contact Al Samuel at the ACM Office (860-513-3205 or alsamuel@acm-ct.org) to make your request or ask a question. Our complete syllabus of courses is available on the website library; go to Members Only, WorkForce Development and see: [WFD Course Syllabus a-o Sep, 2005.pdf](#).

- The next meeting of the WorkForce Development Team will take place at Adchem Manufacturing Technologies, Manchester, on Tuesday, February 16th at 8:00am. Please plan to attend.

Consolidated Purchasing

- The Purchasing Team met on January 6th at Joining Technologies, East Granby. This meeting was dedicated to reviewing our nine year long purchasing agreement with Turtle & Hughes, with T&H Vice President, Dave Howard, and Sales Rep Lynn Greaney briefing the Team.

The T&H agreement with ACM covers all products available, spanning the range of cutting tools, abrasives, MRO shop supplies and safety supplies to shipping materials. Dave stressed T&H's strong VMI (Vendor Managed Inventory) Program and used Delta Industries as the most recent example of changing from a "hard card" inventory control system to adopting this significant cost saving program. T&H will design a specific program to fit each company's comfort level and needs and Dave provided the following guidelines:

- eliminates cost of staffing a tool crib
- eliminates cost of recurring purchase orders (Delta advised of reducing 300 PO's to just one for over 1000 purchased items)
- willing to provide the option of consigning materials, or not!
- no delivery charges (Delta receives deliveries twice a week at no added cost, a significant savings from their previous UPS and FedEx expenses)
- excellent communication between T&H's "bread man" and shop floor employees
- VMI is most effective in terms of cost savings for products regularly ordered, with prices likely to be 15-20% lower than similar items at Grainger or McMaster-Carr
- special reduced pricing is made accessible to all participating ACM firms when T&H makes a "special buy" of products for an ACM member
- VMI program can be as large, or small, as a firm wishes; tool cribs can be staffed and vending machines and "Crib Management" software can be installed. T&H uses the same software internally, so members not having this at their facility can still receive its reports.

In summary, Turtle & Hughes' greatest potential for savings is in the reduction of indirect costs in ordering, stocking and managing recurring shop supplies. Additionally, ACM members share in a sales volume rebate provided annually by T&H to the ACM, based upon total sales milestones. Please contact Dave Howard for additional information or to set up an appointment to be briefed on their VMI Program; Dave may be reached at 203-497-1555 or 860-309-5657. Please be sure to identify yourself as an ACM member firm!

In other discussion, the Team addressed the potential for cost savings using a shared local trucking firm. Randy Plis suggested, and will solicit quotes from, Yankee Courier who can provide coverage for Connecticut, Massachusetts, New York and Rhode Island.

Raw material costs were addressed, with nickel having recently increased in price on the LME by \$1/lb, translating to a likely 6-8% increase in mill prices; this increase will be passed along as a surcharge. Titanium costs are also increasing, with 4-6% surcharges being implemented. Additionally, mill lead times are beginning to stretch out, a sign of economic recovery.

Following the business portion of this Team meeting, Joining Technology CEO Michael Francoeur and President Dave Hudson led Team members on a tour of their facility.

- The next meeting of the Consolidated Purchasing Team will take place on Wednesday, February 17th at 8:00am at Pegasus Manufacturing Inc, Middletown.
- 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

“Beyond Toyota”

--continued from Page 5--

supply stream management, customer support, and management of the overall enterprise are now well known and widely accepted in concept. We've won the battle of ideas on how to operate and improve processes. But creating management systems and organizations that can practice (not just preach) lean every day year after year turns out to be a lot harder. And it's harder for Toyota as well. Many observers have recently noted a gap between the Toyota Production System as an ideal and Toyota's actual production system and between the Toyota Enterprise System as an ideal and Toyota's actual enterprise system, particularly outside of Japan as the company has expanded rapidly across the globe.

But wait. For fear of being misunderstood let me stop here to make myself clear: Toyota will be fine. It is the world's largest car company and it will remain the world's largest car company for decades to come because it still has the ability to do hansei and make necessary course corrections when it stumbles. But the wonderful days of Toyota sweeping all before it as it reveals more and more aspects of its value creating methods are done. (The many readers working at Toyota should feel free to prove me wrong!) I now think of Toyota as the big booster rocket that has blasted us out of the slumber of mass production and modern management. But the big booster has done what it can for us and we must be the second stage. It's our task [on our watch](#) to put lean in orbit, by which I mean creating sustainable lean enterprises in every industry in every country.

So how can we proceed toward this goal in this new and disorienting situation? The answer is the same as it was for Toyota during its creative youth: by performing lots of PDCA on the gemba! But to do this we need a new method and a new metaphor: for the past thirty years we have been earnest pupils following a brilliant leader up the mountain, applying proven lean tools. But we now need to work collaboratively as a group of experimenters from different organizations in a situation where none of us (often including Toyota) knows the best answers to the management and organizational problems we face in the decade ahead. We need to fully share the results of many experiments, decide what doesn't work and (hopefully) what does, and then move on to the next issue. (And there will always be a next issue.)

Group work is always hard and particularly group hansei about what hasn't worked. But the only alternative is to stand by waiting for the “next Toyota” to copy and I am doubtful that there will be a next Toyota any time soon. And, even if there is, it will be very hard to determine which of its management methods sets it apart. (It took years for us to understand this in the case of Toyota.) A far better bet is to work together as a Lean Community to list and gain agreement on the most important problems, to encourage many organizations to try experiments directed at finding countermeasures, to report and share the results. Think of this as A3 by and for the lean movement.

I see this as the mission of the Lean Enterprise Institute and the Lean Global Network as we move forward, although we certainly can't do it alone. As a start I would find it very interesting to hear from the Community about the most important management and organization problems we need to address to achieve orbital velocity and the types of experiments we need to conduct to resolve them. If you are willing to share your thoughts by return e-mail, I will summarize them and share them with you in a future e-letter. (And perhaps we can bundle the actual responses, leaving out identifying details, in a format where everyone can see them and make their own judgments.) I hope many experimenters then will step forward to tackle each problem and share their results so we can all do PDCA together as a community of lean practice.

With best wishes for a lean and prosperous New Year,

James P. Womack, Founder and Chairman
Lean Enterprise Institute, Inc.