

VOLUME 40  
NUMBER 3  
SUMMER 2003

# THE M.C.GILL DOORWAY™

*HIGH-PERFORMANCE COMPOSITE PRODUCTS SINCE 1945*



# Freighter Conversion Experts

# Passenger to Freighter *Conversion*

**T**he M.C. Gill Corporation has a longstanding history of supporting major aerospace programs and Passenger to Freighter conversions are no exception. As a leading manufacturer of both cargo liners and floor panels, with a vast portfolio of both OEM-qualified and proprietary products, we are in a unique position to offer our customers the optimum product solutions.

What is involved in designing products for freighter aircraft? It begins with a solid understanding of the in-service conditions. As we know from working with customers, there are many variables which can influence these conditions, including bulk vs. containerized cargo, type of loading system, number of

cycles and environmental conditions. While our experience and expertise have helped us to identify key product characteristics which help to predict a product's in-service performance, we also rely on customer input, including service testing to verify a product's durability. At M.C. Gill, we recognize that there is no single solution to meet the unique requirements of freighter conversions and we maintain flexibility in our product lines to ensure that we can provide exactly the right type of product where it is required. When it comes to designing products, our goal is to offer high-quality products at competitive pricing and we believe that our success is evidenced by the many M.C. Gill proprietary designs which have become industry standards.





The M.C. Gill Corporation's flexibility in designing products for freighter conversions is supported by our vertically integrated manufacturing environment. Our proprietary resin formulations, coupled with the ability to prepreg virtually every commercially available reinforcement, give us the ability to tailor cargo liners and panel facings to meet the most stringent impact, abrasion and hole tear-out requirements. Equally flexible is our ability to incorporate various core materials including end-grain balsa wood, aluminum honeycomb, Nomex honeycomb and fiberglass-reinforced laminate to meet specific performance requirements. Our vertical integration includes fabrication capabilities which allow us to

supply cargo liners and floor panels as raw sheet stock or fabricated-to-drawing. Historically, we have supported such programs as MD-11, A300B4 and ATR42/72 fully detailed cargo liner and/or floor panel kits.

Today there are nearly 1,800 freighters in service worldwide, many of which feature M.C. Gill cargo liners and floor panels. For the last five decades, M.C. Gill Corporation has led the industry in introducing *next-generation* cargo liners and floor panels. While we continue to develop new products to meet the changing needs of our customers, we are gratified to know that many of our vintage proprietary products remain the materials of choice with operators around the world.

**M.C. Gill Corporation has led the industry in introducing *next-generation* cargo liners and floor panels.**



## Popular Products for Freighter Conversions

### ■ Gillfloor™ 5007C Panels

First introduced in 1979, 5007C continues to be one of the company's largest-selling replacement floor panels for freighter application. This product was developed in response to our customers' request for a more durable FRP/Balsa panel for use in and around doorways areas – typically the highest-wear areas in a cargo-configured aircraft. The design is a derivative of 5007B which incorporates a fiberglass mat on the top side for superior abrasion resistance.

### ■ Gillfab™ 4017T Type III Panels

When operators requested a FRP/Nomex® panel that would endure the service conditions of a freighter aircraft, M.C. Gill Corporation responded by enhancing its proven design of Gillfab 4017T to increase durability. Since its introduction to market, this panel has become widely used, particularly in MD-11F aircraft where drainage conditions may warrant the use of a non-metallic, corrosion-resistant construction.

### ■ Gilliner™ 1066 Laminates

An industry favorite for almost 40 years, 1066 cargo liner is recognized throughout the industry for its proven history of in-service durability and low relative cost. This combination of M.C. Gill proprietary polyester resin and a high ratio of E-glass reinforcement has resulted in excellent product performance.

### ■ Gilliner 1366 Laminates

Designed to offer superior impact resistance, 1366 is one of the M.C. Gill Corporation's first polyester cargo liners to incorporate S-glass reinforcement. Because this product offers higher mechanical properties as compared to general purpose laminates, it can also be substituted in thinner thicknesses with no sacrifice to performance.

### ■ Gillfab 1167 Laminates

Initially developed to offer the aerospace industry a high-impact-resistant, low-smoke-and-toxicity cargo liner for passenger aircraft, Gillfab 1167's high flexural strength and modulus have made it a material of choice for conversion programs where design necessitates use of a more rigid laminate to prevent sagging between structures.

## Looking Ahead

As an industry leader in the design and manufacture of advanced composites, the M.C. Gill Corporation recognizes the importance of new product innovation to meet the changing needs of our industry. Much of our product development work is in direct response to requests from our customers or needs that we perceive, based on our extensive experience working with OEMs, airlines and MROs. Some concepts currently being evaluated include:

- Transparent cargo liner
- Ultra-lightweight cargo liner for next-generation aircraft
- Stainless steel-faced bulk cargo floor panels
- Toughened resin systems for improved durability



## **Aeroconseil Conversion Program Panel Detailing Handled by M.C. Gill Europe, Ltd. in Northern Ireland**

Aeroconseil has undertaken a program of ATR 42 and 72 aircraft conversions using M.C. Gill products. These Passenger-to-Freighter conversions (P-to-F) are JAA and FAA certified through the Aeroconseil STC (Supplemental Type Certificate). The aircraft is fully converted in less than eight weeks. Four aircraft will be converted in 2003; and the demand for these P-to-F conversions is constantly increasing.

The French holding company Groupe Aeroconseil is headquartered in Blagnac near Toulouse, France. Its seven Business Units offer technical services – design, aircraft modifications, maintenance engineering, follow-up of flight operations and consulting – to all aeronautical players: aircraft manufacturers, suppliers, owners, airlines and maintenance centers.

Detailing of reinforced floor panels is being handled by M.C. Gill Corporation Europe, Ltd., which also supplies the liners for these conversions. This M.C. Gill European operation has extensive experience handling the detailing of panels with similar conversion programs. This includes a contract with British Aerospace Aviation Services for conversion of A300B4 aircraft. About 60 ship sets were completed for this program.

M.C. Gill Corporation Europe, Ltd. is located in Bangor, County Down, in Northern Ireland 14 miles from Belfast, close to both the city and international airports and to fast-ferry links to the U.K. mainland. The company has been serving the aerospace industry since 1984 and has an exceptional track record of supporting OEM, spares and maintenance programs. Formerly known as “Insoleq,” it has a wide range of aviation customer approvals and it manufactures original equipment under a JAR21 approval. Additional approvals include BAe Systems, Airbus UK, Raytheon, Bombardier/Shorts and others.

M.C. Gill Corporation Europe, Ltd. offers the service, efficiency, cost base and responsiveness of a small company, combined with the considerable investment resources, R&D, and state-of-the-art manufacturing capabilities of the M.C. Gill Corporation, USA. We are committed to providing exceptional service to our customers and look forward to exceeding your requirements in whatever area of aviation you operate.

### **To learn more about this Aeroconseil program:**

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### **For additional information on M.C. Gill European capabilities:**

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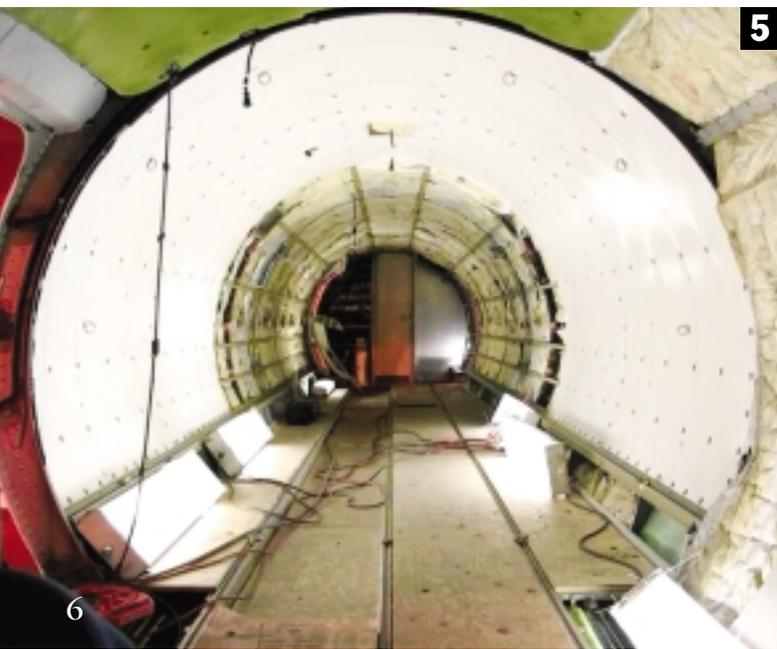


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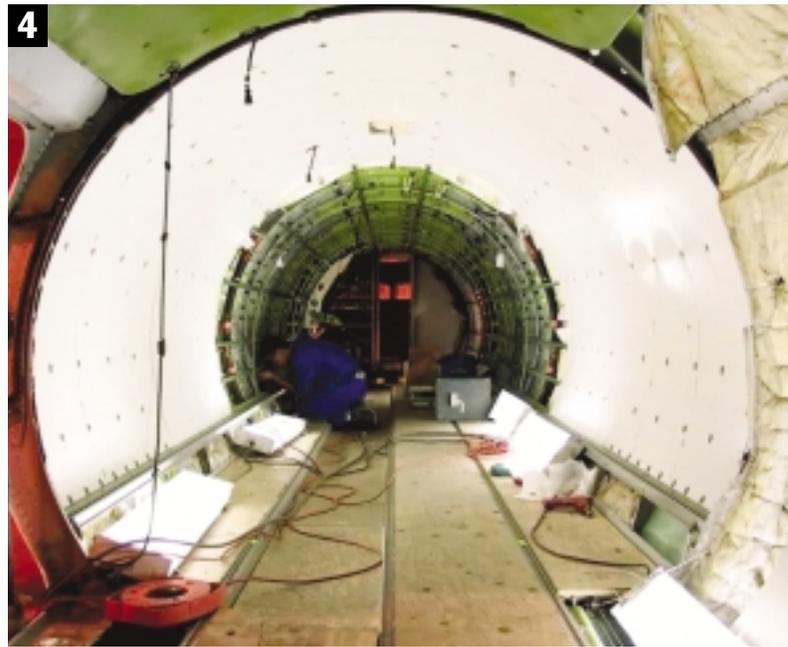
# Field Aviation – Calgary, Alberta



5



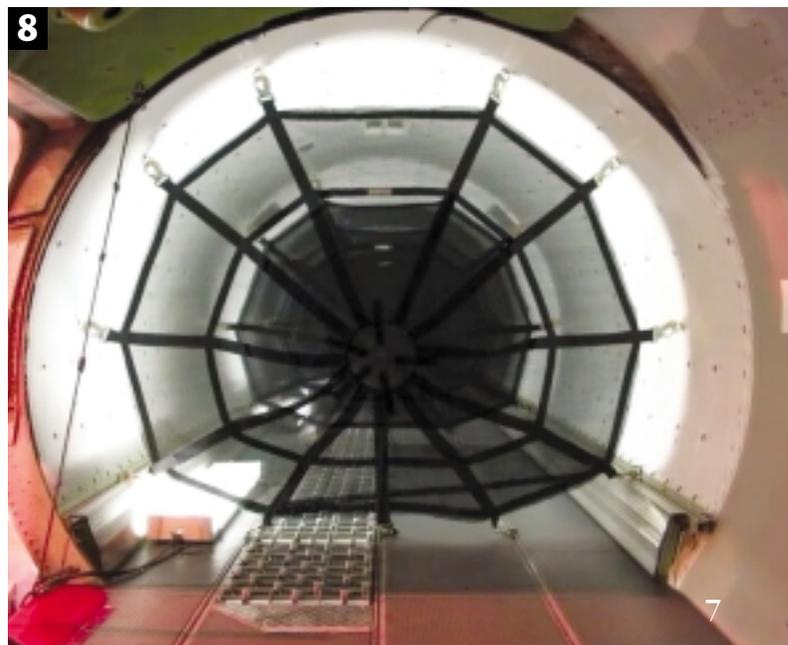
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**Saab 340** – One of the major conversion programs Field Aviation undertakes involves the Saab 340 regional airliner. This plane has been in service since 1984, having proved itself highly reliable. It has turboprop efficiency and high reliability at a comparably low operating cost. Field Aviation worked with Saab to develop Service Bulletins to convert the Saab 340A from passenger service to a freighter aircraft. Saab Aircraft AB is the Type Certificate holder with all necessary changes

in manuals and certification part of this OEM-developed conversion.

This freighter version will have a class E certification, meaning that the cabin will be used for cargo only. A smoke curtain is added to protect the cockpit and a roller system to facilitate cargo loading is installed and the existing aft bulkhead removed. Cabin air flow is retained so that temperature-sensitive goods can be transported.



# Composite Balconies for Cruise Ships

*Easy to install*

**Sainte-Nazaire, France** – Alcore Brigantine has applied its composites technology to a design-build program for a series of cabin balconies to be inserted in cruise ships.

Already known as a world-class fabricator of composites to the aircraft industry, the company readily adapted these technologies to building modular components for ships. The work is being undertaken for Alstom Chantiers de L'Atlantique shipyard in Sainte-Nazaire, France. This is the yard that built the ships France, Normandie, Ile de France and other great ocean liners.

The original goals of the assignment were to create structural balconies with a door and privacy wall. The resulting design of

aluminum facings over aluminum honey-comb core saves weight and provides easy installation with improved aesthetics that blend perfectly with the ship's design.

Among other maritime projects, the company is fabricating 800 separating walls and doors in the Queen Mary 2 – an enormous ship, one hundred feet longer than the Eiffel Tower is tall. It is also involved in design-build of modular floors for new ships of various sizes.

Alcore Brigantine is part of the M.C. Gill Corporation Group of Companies.



# Les balcons préfabriqués en composites pour les paquebots



**Saint-Nazaire, France** – Alcore Brigantine a mis sa maîtrise des technologies composites au service d'un programme de construction de balcons de cabines sur les paquebots

Déjà mondialement reconnu comme un fabricant de composites pour l'industrie aéronautique, Alcore Brigantine a adapté efficacement ces technologies pour construire des composants modulaires et préfabriqués de grandes dimensions pour les navires de croisières. Ce projet d'innovation est conduit par les Chantiers de l'Atlantique du groupe Alstom. Le chantier français avait construit dans les années soixante le France, le Normandie, l'Île de France, il poursuit son développement aujourd'hui avec la construction de cinq navires par an.

L'idée originelle était de créer des balcons structurels préfabriqués avec portes et cloisons privatives. Ces pièces conçues entièrement en nid d'abeilles avec des peaux aluminium sont révolutionnaires pour ce type d'applications. La synergie avec le design général des navires est bien atteinte.

Parmi d'autres projets pour l'industrie navale, Alcore Brigantine produit actuellement 800 cloisons et portes pour le Queen Mary 2 (un énorme paquebot, cent pieds plus grands que la Tour Eiffel). L'entreprise est aussi engagée sur d'autres projets de planchers modulaires pour des bateaux de différentes tailles.

Alcore Brigantine fait partie de M.C. Gill Corporation Group of Companies.

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# Flight Deck Underfloor Stowage Unit

## Made with Gillfloor™ 4017T

### *AMS Receives Supplemental Type Certificate*

Where do you find extra space to store things in a small, secure cockpit? In light of new security regulations, there is a need to find new places to gather, store and secure items that pilots need to have on hand.

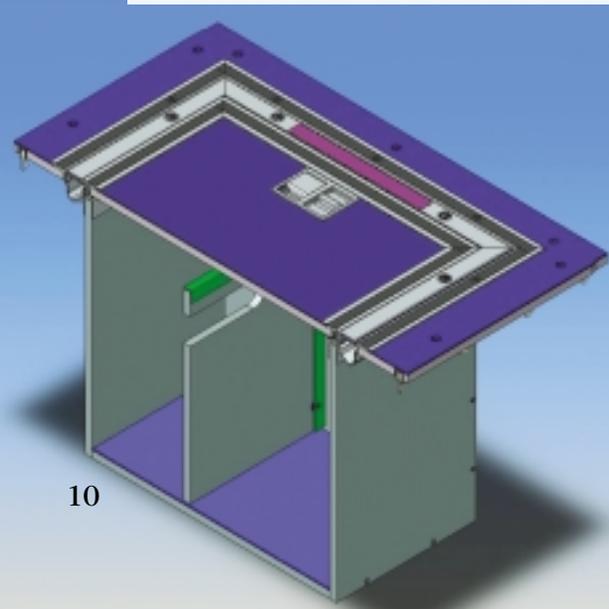
AeroMechanical Services Ltd. (AMS) designed a multi-purpose stowage box that takes advantage of unused space under the cockpit floor in a number of aircraft. AMS received a Transport Canada and FAA Airworthiness Certification Supplemental Type Certificate (STC) for the installation of a flight deck Underfloor Stowage Unit in Bombardier Aerospace CL-600 Series including the CRJ 100/200/700/900 and Challenger 600/601/601-3A/604 aircraft, in addition to DHC-8 aircraft.

The Underfloor Stowage Unit adds additional stowage space in the cockpit that is easily accessible to the crew, and provides space for various mandatory equipment list items such as the aircraft

manuals. It is constructed with M.C. Gill Corporation's Gillfloor™ 4017T, Type 1 (0.400") panels, which were selected for their light weight and strength.

Rules put into effect since 9/11 require that the cockpit door remain locked during flight, so placing these manuals in the coat closet is no longer an option for flight crews. The installation of the Underfloor Stowage Unit also has the potential to help decrease the number of flight manuals each pilot needs to carry by leaving one set permanently in the Stowage Unit.

"The Underfloor Stowage Unit prototype was test fitted in a CRJ 200 after a long development, testing and prototyping phase. We designed the unit to be easy to use and quick and easy to install. The optional floor panel allows for installation in less than four hours, including the installation of a new self-contouring edge seal," reported Derek Taylor, AMS Program Manager.



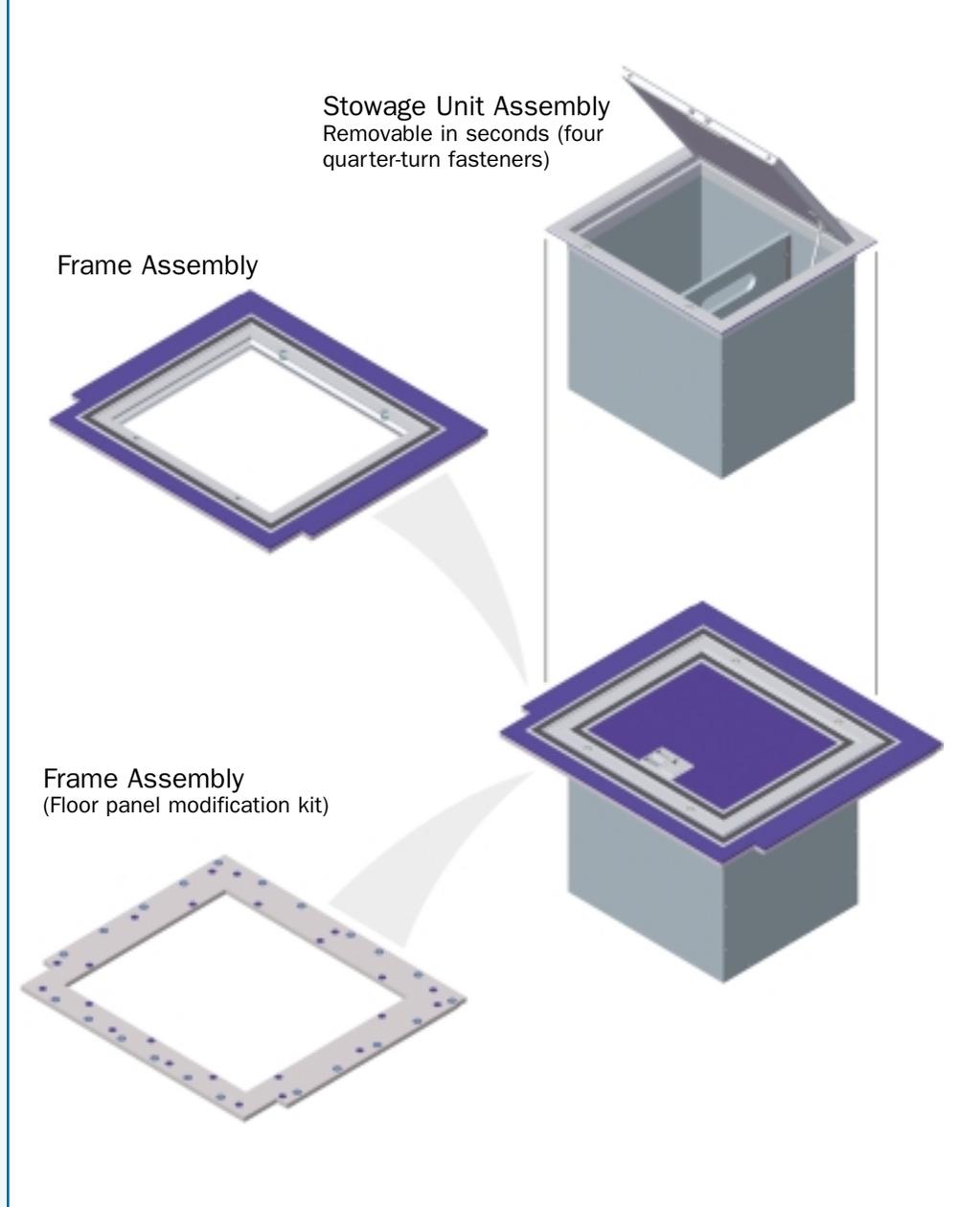


Cindy Mays  
Senior Sales Rep.

**“I worked with the engineering team to determine the M.C. Gill panel that best met the requirements of this innovative application.”**

An early customer commented, “Our flight department has just added an additional CRJ 200 to our fleet and we have found, as with our first CRJ, there is lack of crew manual stowage space. This Underfloor Stowage Unit is easily accessible from the crew seats and is large enough to house the manuals necessary for crew members as it solves stowage and accessibility issues.”

The Underfloor Stowage Unit is being included in the Bombardier CRJ customer options catalog. The catalog is a source for post-production enhancements that can be added when purchasing an aircraft or retrofiting. This is currently the only product of this sort endorsed by Bombardier,



and the only approved flight deck stowage unit for the CRJ 100/200/700/900 aircraft.

AeroMechanical Services is a Calgary-based company that designs, builds, markets and supports innovative solutions for the global airline business. AMS products range from ice shields and underfloor stowage units to the innovative AFIRS™ data collection and transmission devices.

“AMS continues to identify, research, develop and certify innovative products to economically solve business problems

for the aviation world,” said Darryl Jacobs, AMS President. “This product definitely exceeds our company mandate of providing effective solutions to airline business problems. We found that M.C. Gill Corporation’s panels provided the material we were looking for in this application.”

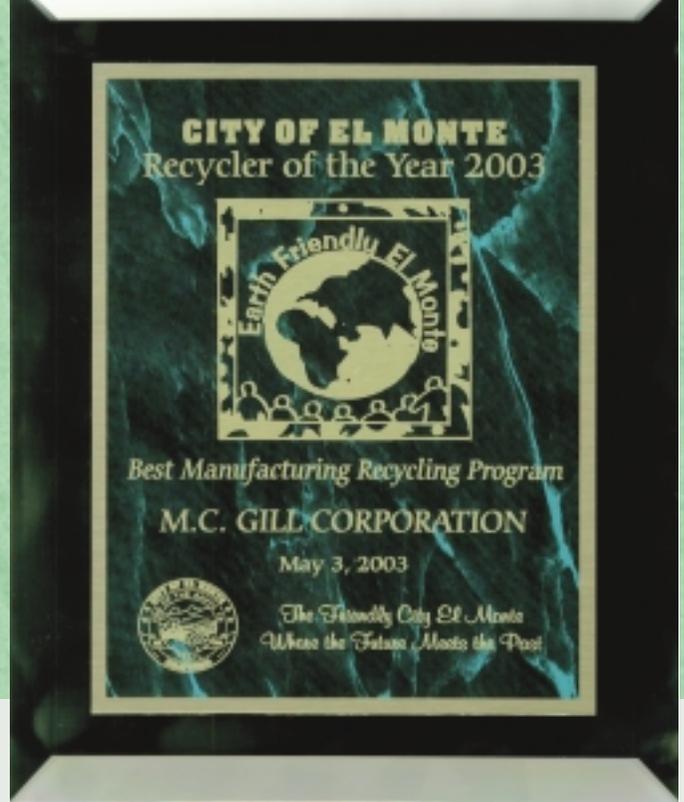
AMS currently has these stowage units installed in an Alberta Government DHC-8-100, a Challenger, a corporate CRJ 200, a corporate CRJ 700 and additional installations pending with a range of major CRJ operators.

# Recycler of the Year



**M.C. Gill Corporation has also been honored with a Certificate of Recognition for our continued efforts to meet the U.S. Environmental Protection Agency requirements.**

*M.C. Gill Corporation is headquartered in El Monte, a suburb of Los Angeles, about 20 minutes east of downtown. The city is famous for being the end of the Santa Fe Trail, the legendary dirt track that covered wagons followed west before California became a state.*

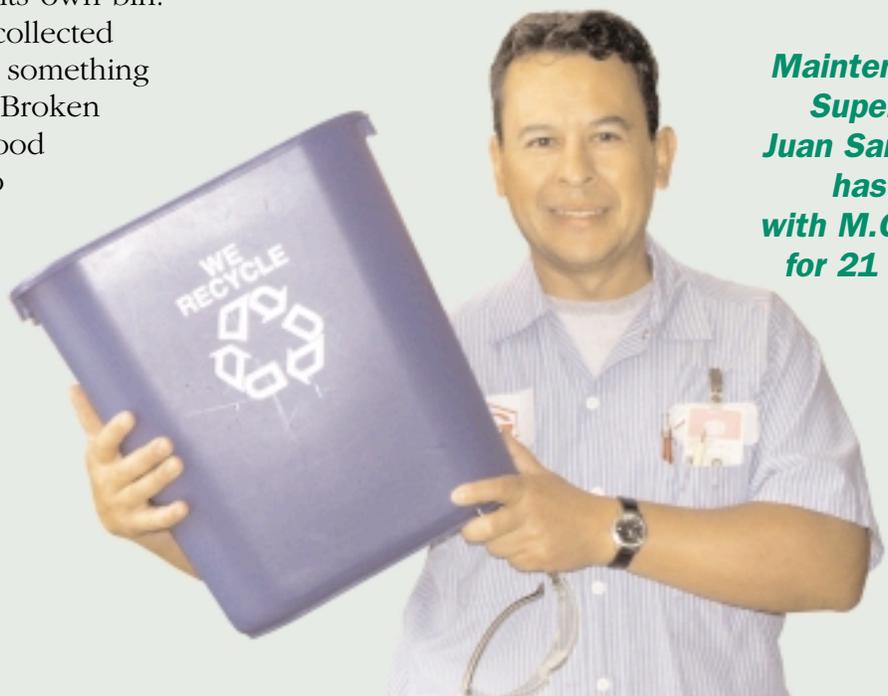


Today “Earth Friendly El Monte” is home to a progressive recycling program that is following a state mandate to reduce waste by 50 percent. Because of improvements in our recycling efforts, M.C. Gill was honored at an Earth Day Community Resource Fair as *City of El Monte Recycler of the Year*.

“We are proud of our continuing improvement in recycling and awareness to Green issues,” Juan Sanchez, Maintenance Supervisor reports. “Over the last two years we have doubled the amount of recycled materials we gather and send to reprocessors. These include a lot of different materials. We now have bins for metal that can include materials like ducting, pipes or fittings. Scrap aluminum is gathered in its own bin. Cardboard and office paper is collected together, paper recycling being something we have done for a long time. Broken pallets make up most of the wood recycling. I am working now to find a source who will take our plastic materials so they can enter the recycling stream.”

Juan has been with M.C. Gill for 21 years. “Over the last two decades I have seen big changes in the awareness of recycling. Everybody knows how important it is and that it is a global issue. We are constantly searching for new ways to reduce what we are sending to landfills, reducing waste products and recycling more and more.”

M.C. Gill thanks El Monte for this recycling program award.

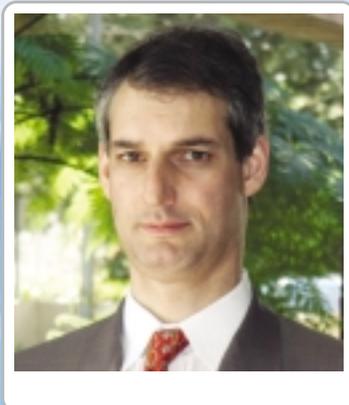


**Maintenance Supervisor Juan Sanchez has been with M.C. Gill for 21 years**



*M.C. Gill Corporation  
enjoys visitors from  
all over the world.*

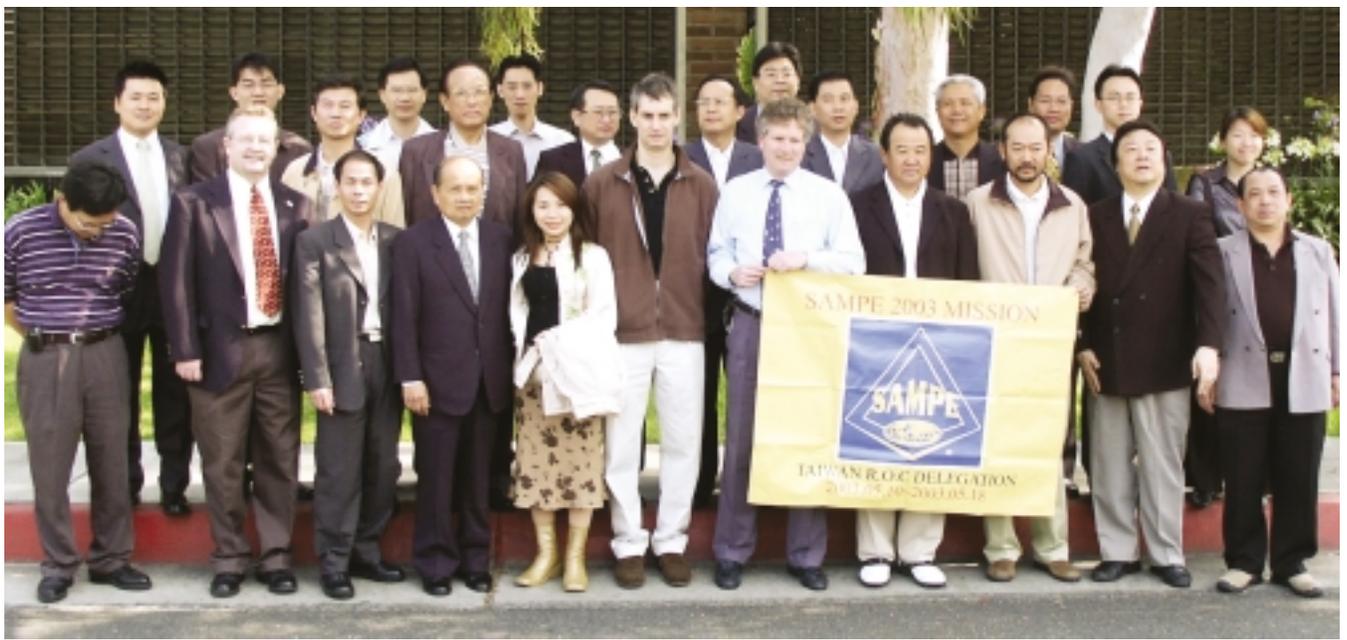
# Gillshots



**Paul Marks  
of Argosy  
International,  
an M.C. Gill  
and Alcore  
representative  
in the Pacific  
Rim.**



**Matthias Kolb, Procurement Aerostructures Interiors, and  
Dr. Jens Franzeck, Senior Manager, Procurement Aerostructures  
Interiors from Airbus, with M.C. Gill.**



**The Taiwan SAMPE Group and the Taiwan FRP Industry Association visited our plant after the SAMPE show in Long Beach.**

# The M.C. Gill Group of Companies



## M.C. Gill Corporation

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The M.C. Gill Corporation is the world's largest manufacturer of original equipment and replacement baggage compartment liners for passenger and freighter aircraft. We are one of the largest producers of composite sandwich panels used for aircraft flooring in these markets.

The company also excels in most other types of fiber-reinforced plastics including flat panel composites, bullet-resistant ballistic laminates, interior panels for creating structures such as aircraft galleys and bulkheads, honeycomb core and related products.



Manufactures a variety of metallic honeycomb cores for aerospace and other applications. Offers extensive special processing capabilities on metallic and non-metallic cores, from simple operations like chamfering to complex processes including roll-forming, 5-axis machining and splicing of different densities into core blankets.

Alcore  
Lakeside Business Park,  
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phone: 410 676-7100  
fax: 410 676-7050  
email: sales@alcore.com

Alcore Overnight™  
Expedited Delivery  
email: overnight@alcore.com

*Alcore does not sell sandwich panels.  
Contact M.C. Gill for these products.*



Specializes in aircraft-quality metal parts fabrication, engineering and design. If a piece of metal can be bent, pressed, punched, routed, shaped, molded, welded, profiled or fabricated into a high-performance part, Castle has the equipment and experience to do it.

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Offers broad capabilities in structural core materials technology in Europe, including: Aluminum honeycomb, with special processing expertise and an in-house design office. Manufacture of sandwich panels from simple shapes to extremely complex parts. Advanced aluminum honeycomb shock absorption materials used as a kinetic energy absorber in everything from high-speed trains to automotive safety.

Brigantine propose une offre de compétences très large sur les technologies des matériaux d'âme structuraux en Europe. Fabrication de nid d'abeilles aluminium, expérience de l'usinage de précision de ce matériau, bureau d'études intégré. Fabrication de panneaux sandwich, des grandes séries aux pièces les plus complexes. Etude et fabrication d'absorbeurs de chocs en aluminium pour de nombreuses applications allant du ferroviaire à l'automobile.

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## M.C. Gill Europe Ltd.

Manufactures aircraft insulation, details composite panels including various honeycombs and creates complex assemblies using advanced fabrication methods. It also provides warehousing for other M.C. Gill products for quick European delivery.

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# THE FUNNY SIDE



# Trivia

First Woman: "My dog is so smart. Every morning he waits for a paper boy to come around and then he takes a newspaper and brings it to me."

Second Woman: "I know."

First One: "How?"

Second One: "My dog told me."

★ ★ ★

Just once, I would like to see an intelligent witness on the stand:

Prosecutor: "Did you kill the victim?"

Defendant: "No, I did not."

Prosecutor: "Do you know what the penalties are for perjury?"

Defendant: "Yes, I do. And they're a hell of a lot better than the penalty for murder."

★ ★ ★

Just before Thanksgiving, the holding pen was abuzz as Mother Turkey scolded her younger birds. "You turkeys are always into mischief," she gobbled. "If your grandfather could see the things you do, he'd turn over in his grave."

★ ★ ★

Why wouldn't they let the butterfly into the dance?

Because it was a moth ball.

★ ★ ★

What is evil and ugly on the inside and green on the outside?

A witch dressed as a cucumber!

★ ★ ★

What did the zero say to the number eight?

"Nice belt!"

★ ★ ★

"Do you love me?"

"Of course."

"Then whisper something soft and sweet in my ear."

"Lemon meringue pie!"

★ ★ ★

My husband is a man of many parts. Pity they weren't put together properly!

★ ★ ★

"Did he really marry her because of her grandfather's fortune?"

"He denies it. He says he would have married her no matter who had left her a fortune."

★ ★ ★

"Sir, I'd like your daughter for my wife."

"Can't she get one of her own!"

★ ★ ★

Why don't Vikings send emails?

They prefer to use Norse code.

★ ★ ★

There are two cows in a field. One says to the other,

"So what do you think of mad cow disease?"

The other replies, "I dunno, I'm a chicken."

## Real Names of Famous People

Alan Alda	Alphonso d'Abruzzo
June Allyson	Ella Geisman
Eve Arden	Eunice Quedens
Fred Astaire	Frederick Austerlitz
Ginger Rogers	Virginia McMath
Frankie Avalon	Francis Thomas Avalonne
Gene Barry	Eugene Klass
John Barrymore	John Blythe
Orson Bean	Dallas Frederick Burrows
Buster Crabbe	Clarence Linden Crabbe
Joan Crawford	Lucille LeSueur
Christopher Cross	Christopher Geppert
Tom Cruise	Thomas Cruise Mapother IV
Tony Curtis	Bernard Schwartz
Bobby Darin	Walden Robert Cassotto
Jimmy Dean	Seth Ward
Sandra Dee	Alexandra Zuck
Troy Donahue	Merle Johnson, Jr.
Kirk Douglas	Issur Danielovitch Demsky
Richard Burton	Richard Jenkins
Red Buttons	Aaron Chwatt
Michael Caine	Maurice J. Micklewhite
Rory Calhoun	Francis Timony Durgin
Truman Capote	Truman Streckfus Persons
Gloria Estefan	Gloria Maria Fajardo
Dale Evans	Frances Octavia Smith
Roy Rogers	Leonard Slye
Chad Everett	Raymond Lee Cramton
Morgan Fairchild	Patsy Ann McClenny
Sally Field	Sally Mahoney
John Garfield	Julius Garfinkle
Kate Capshaw	Kathy Sue Nail
Hopalong Cassidy	William Lawrence Boyd
Chevy Chase	Cornelius Crane Chase
Cher	Cherilyn Sarkisian
Andrew Dice Clay	Andrew Silverstein
Whoopi Goldberg	Caryn Johnson
Cary Grant	Archibald Alexander Leach
Jean Harlow	Harlean Carpentier
Susan Hayward	Edithe Marrener
William Holden	William Franklin Beedle, Jr.
Harry Houdini	Ehrich Weiss
Rock Hudson	Roy Scherer
Fred Astaire	Frederick Austerlitz
Lauren Bacall	Betty Joan Perske
Robert Blake	Michael Gubitosi
David Bowie	David Robert Jones
Cyd Charisse	Tula Finklea
Connie Francis	Concetta Franconero
Greta Garbo	Greta Gustafsson
Paulette Goddard	Marion Levy
Stewart Granger	James Stewart
Rex Harrison	Reginald Carey
Jennifer Jones	Phyllis Isley
Tom Jones	Thomas Woodwood
Boris Karloff	William Henry Pratt
Michael Keaton	Michael Douglas