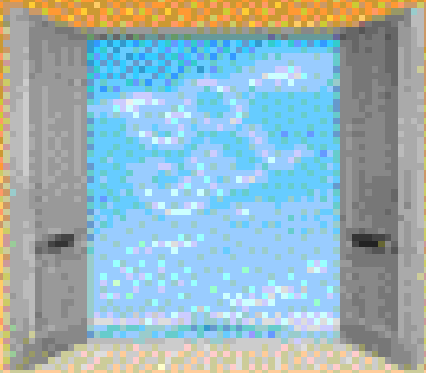


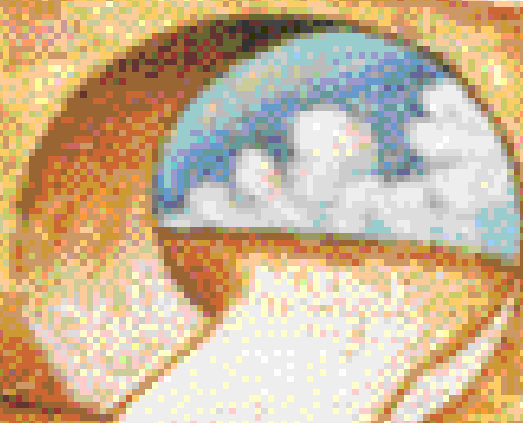
VOLUME 37
SUMMER 2000
NUMBER 3



THE M.C. GILL DOORWAY

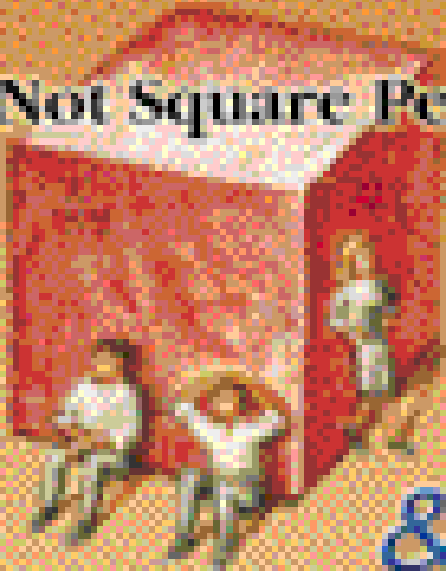
New Vistas in Composites

M.C. GILL CORP., 4056 EASY ST., EL MONTE, CA 91731 • PHONE (626) 443-4022 • FAX (626) 350-5880 • www.mcgillcorp.com



**Go With
The Guys
On The Ball...**

...Not Square Pegs In Round Holes, But



Shapes Shipsets & Sure-Fits

The M.C. Gill Corporation got its start configuring raw stock panels in 1953, when we fabricated cargo liner, painted it navy grey, (no Tedlar back then), and stenciled the part numbers for 83 Douglas DC-6's. We REALLY got into the business of providing drop-in ready panels in 1992, when McDonnell Douglas approached us about providing fabricated flooring panels for the MD-80 (and later, the MD-90). Prior to that, however, we had purchased the first of two 3-axle CNC (Computer Numerically Controlled) machines. We believed that the future for fabricated parts was a bright one and we were willing to make the investment of dedicating and constructing a 5,800 square foot self-contained three-room profiling and finishing facility as well as all the supporting and ancillary equipment.

The concept of fabricating parts dovetailed with our ongoing efforts to further pursue vertical integration. This endeavor not only allows us to provide the OEM and replacement markets with additional services but also to more closely monitor and control the quality of the finished products.

M.C. Gill profiles many different constructions of raw stock material, including carbon, fiberglass cloth, and aluminum facings with Nomex and/or aluminum honeycomb or end grain balsa wood cores - primarily flooring panels and cargo liner. The company also provides the additional services required to give the customer a drop-in ready part when it leaves our plant. These services include painting, installing inserts, preparing and applying edge fill potting compound, and stamping the part with the reference information to facilitate traceability.

Many of our customers have asked us about the different sizes, shapes, and materials we can work with on the two CNC machines. Relying on the old "a picture is worth a thousand words" adage, a sampling of the various shapes and sizes appear on the following pages.

For the size and shape you need please contact us. We have no doubt we can satisfy your requirements.

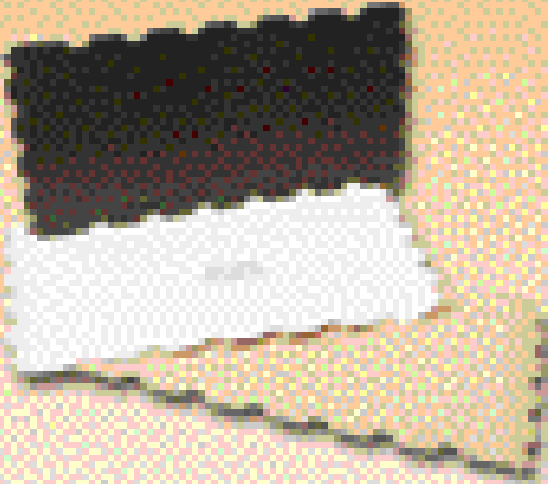


Starting With Our Raw Stock Composite Panels

We Create Drop-In Ready Parts → → →

These CNC operators show the long and short of it. The panel on the left is Gillfab 4017T (fiberglass cloth reinforced polyester facings bonded to a 9 pcf Nomex honeycomb core) used as an access panel to allow electrical checks in a modified MD-11. On the right is a Gillfloor 5007C (fiberglass cloth reinforced polyester fused to an end grain balsa wood core) and serves as a 2" thick firewall.

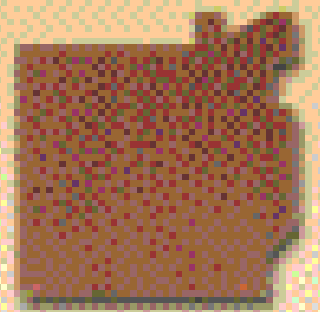
Examples of M.C. Gill Custom



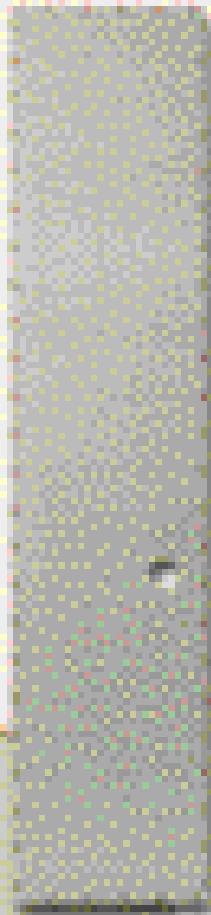
Blowout panel in the cargo compartment of an MD80/90. The dark scalloped piece is the template, the white piece is the face side, and the tan piece is the back side of the M.C. Gill cargo liner Gillfab 1367A. It is constructed from fiberglass cloth reinforced phenolic resin.



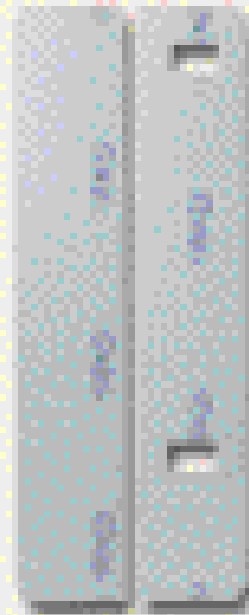
Aircraft window-surround edge attachment. Bonding a fiberglass/acrylic laminate to the windshield, it reinforces the mechanical attachment to the frame. The one above is thermosetting fiberglass reinforced phenolic.



This 0.625" thick part is a ballistic laminate made of S-2 glass reinforced phenolic resin and is used as a lightweight bullet stopping armor in a helicopter.

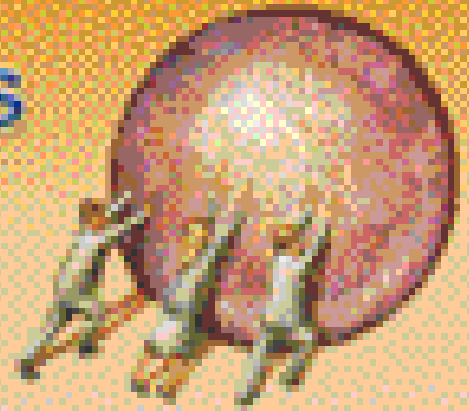


The tall flooring panel at the left is a Gillfab 4017T. The hole provides access for inspection of wiring, ducting, or other key components under the panel.

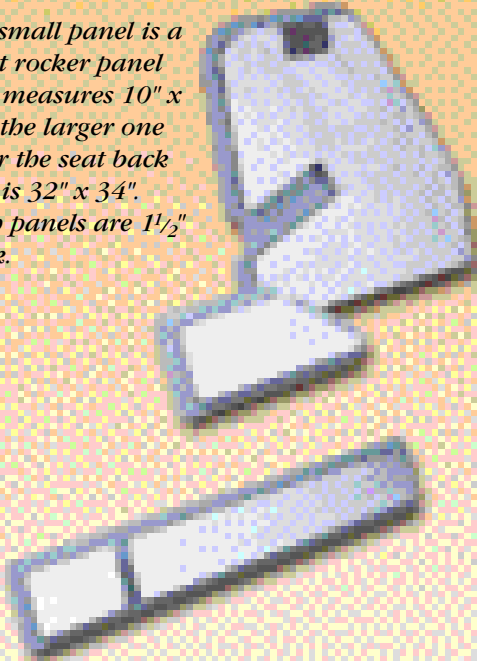


Two more Gillfloor 5007C Firewall panels.

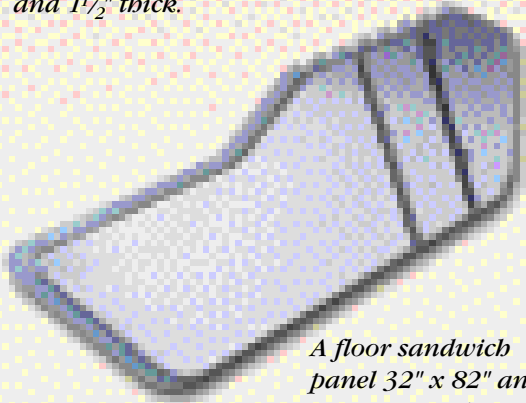
ized Drop-in Ready Parts



The small panel is a front rocker panel and measures 10" x 14"; the larger one is for the seat back and is 32" x 34". Both panels are 1½" thick.



Side rocker panel measuring 10" x 48" and 1½" thick.



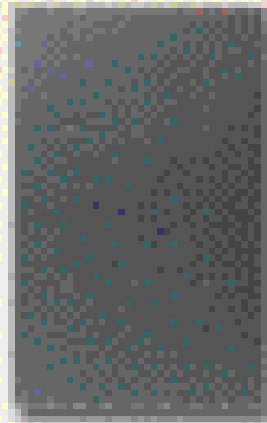
A floor sandwich panel 32" x 82" and approximately 3" thick.



All four of the above prototype-sportscar panels are constructed of aluminum facings bonded to an aluminum honeycomb core.



This Gillfab 4022B panel, also part of the MD-11 modification program, is very light weight and can be used as a galley or bulkhead panel. It is constructed using woven fiberglass cloth reinforced phenolic facings bonded to a Nomex honeycomb core.



This Gillfab 4509 panel (unidirectional carbon reinforced phenolic facing bonded to an 8 pcf Nomex honeycomb core) is used as flooring. It has been drilled, the holes countersunk and inserts installed; and edges routed and potted.

CNC operator demonstrates the latch/handle, installed by M.C. Gill personnel, in the access door panel made of Gillfab 4017T.



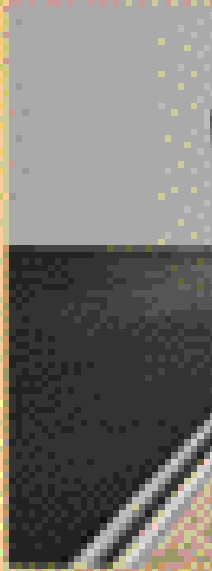
M.C. Gill's Two CNC Profilers To Cut, Rout, Drill



Design engineer utilizes the CAD/CAM system to create CNC programs for profiling the panels shown on previous pages.



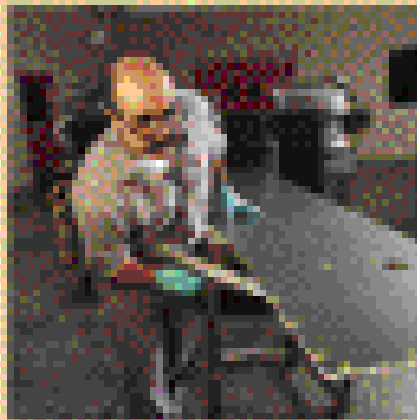
CNC beds with gantries. The machined-in-tool paths serve as a vacuum.



Then We Apply The



Technician adjusts panel on the roller table to ensure proper alignment of inserts. Then inserts are firmly set into the panel.



After a two-part potting compound is measured and mixed it is applied with pneumatic gun as edge fill.



Technician smoothens the edge fill compound and ensures there are no air bubbles along the panel's edges.

...And Voila!, The Parts Are

lers Are Programmed And Countersink...

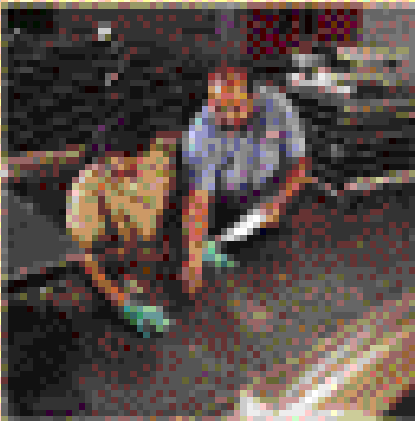


chuck to hold raw stock panels in place for detailing.

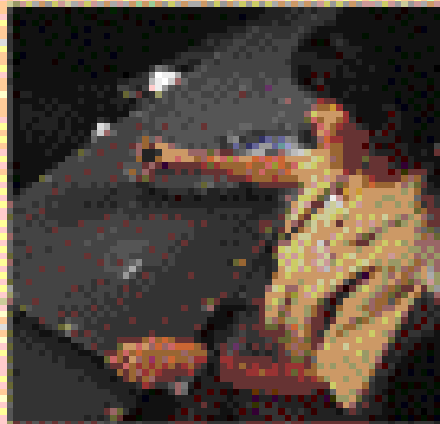


CNC head for drilling and countersinking insert holes.

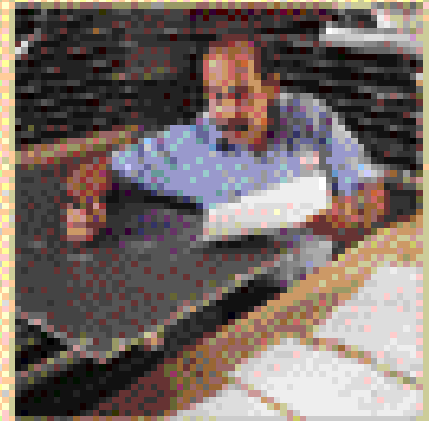
Finishing Touches...



Quality Assurance technicians examine insert placement on the finished panel prior to source inspection.



A reference number is stamped on the panel to facilitate traceability, if required.



QA technician verifies the final paperwork necessary for inspector's visit.

Ready For You To Install

THE FUNNY SIDE

The first guy to see the light turn green is the driver of the second car in line.

★★★★

Seconds after the traffic accident, a woman was first to reach the driver. A man pushed her out of the way saying, "Step aside, lady. I took a course in CPR." The woman stepped back, watched him a few seconds, then tapped him on the shoulder. "When you get to the part about calling a doctor, I'll be right here," she said.

★★★★

I intend to live forever. So far, so good.

★★★★

Who is General Failure and why is he reading my hard disc?

★★★★

Why do psychics have to ask you for your name?

★★★★

All those who believe in psychokinesis raise my hand.

★★★★

The candidate rushed home and exclaimed to this wife, "Honey, I got elected!" "Honestly?", she asked excitedly. "Now, why did you have to bring that up?", he responded.

★★★★

When the husband says, "But dear, there's only two minutes left in the football game," it amounts to the same amount of time as when his wife says, "I'll be ready in two minutes."

★★★★

All men are born with the same number of hormones. If some want to waste them on growing hair, that's their business.



Trivia

There are more vehicles than persons in Wyoming .

★★★★

If you're an amateur golfer the odds of you making a hole-in-one on a par three hole are 11,000 to 1. If you're a PGA pro, the odds are 750 to 1.

★★★★

Cows can chew but can't spit.

★★★★

Included in the findings of a recent report on hotel guests: men bring more luggage, are better tipplers, and leave a cleaner bathroom; women use more towels, take more in-room amenities, and are more likely to turn off the lights when they leave the room.

★★★★

Texas high school football coaches make, on average, 75 percent more than teachers in the same school.

★★★★

There are 40,000 species of spiders.

★★★★

By age 17, the average person knows approximately 80,000 words.

★★★★

The Washington, D.C. Hilton "loses" 20,000 silver teaspoons per year.

★★★★

For every 10 hair stylists in Detroit, there are 8 school teachers.

★★★★

In California, the maximum legal length of a limousine is 65 feet. The longest one available to rent is 66.5 feet.