



GE Engine Services

service solutions

engines
maintenance
material
finance
information

Engine Exchanges Provide Immediate Availability, Reduce Turn Time

GE's new Engine Exchange program offers an innovative solution to engine maintenance that provides immediate engine availability with guaranteed performance. Aircraft with CFM56-3 series engines can receive an already overhauled replacement engine built with OEM technology without the turnaround time typically associated with an overhaul.

"Engines are immediately available through the Engine Exchange program, which eliminates the need to lease a spare engine while an overhaul takes place," said Dan Heintzelman, president and CEO, GE Engine Services. "Since the exchange engine is installed when the customer's engine is removed, the Engine Exchange program gives customers increased productivity, eliminating the removal of the leased engine and reinstallation of the engine after overhaul."

The cost of the exchange engine is fixed depending on build specification, providing more cost predictability and reduced risk than Time and Material overhauls. Additionally, GE offers fair market value for the removed engine, which reduces the customer's out-of-pocket expense.

The program is being offered for engines installed on owned and leased aircraft. GE is working with aircraft leasing companies to create processes to facilitate efficient exchange of engines on leased aircraft. "GEAE has designed and developed, working closely with GECAS, an 'engine exchange' product offering providing another option to our lessees that can potentially save critical

cash flow while maintaining asset residual value," said Jim Marmion, senior vice president, GE Capital Aviation Services.

Flexibility and efficiency are additional advantages of the Engine Exchange program. "Customers can either do the engine change themselves or utilize GE On Wing Support," said Heintzelman. "Title transfer and physical exchange of engines can be done at a mutually agreed location to ensure timeliness, efficiency and cost-effectiveness. Essentially, we've designed the program to minimize turn time and maximize customer efficiency and uptime."

Engine Exchanges also may qualify for U.S. EX-IM Bank financing for some customers. The program is available now for CFM56-3 engines, and will be expanded to some CF6-80C2 engine models and CF34-3 models in 2005.



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New GE Component Management Program Frees Up Capital for Airlines

From \$40,000 avionics components to \$800,000 APUs, rotables and repairable parts are a critical and costly part of an airline's operations. GE has an innovative productivity solution to put an airline's "spare parts" to work more efficiently.

GE's new Aircraft Component Management service helps airlines finance and manage their rotatable airframe and engine spare parts, reducing capital investment, lowering costs and improving on-time performance.

"Our component management service is another financing and productivity service we can offer to airlines," said Marc Morris, general manager. "It is a complete solution for an airline's spare parts inventory that avoids huge capital investment and reduces inventory costs."

The Aircraft Component Management service is a comprehensive program of financing, inventory optimization and parts management. GE will guarantee any service level an airline chooses by owning, optimizing and managing the parts to deliver that service guarantee.

Here's how the program works. GE purchases the airline's spare parts inventory, freeing up capital for other uses. The parts inventory, which is maintained at airline line stations where needed, is then opti-

mized using state-of-the-art Logistechs technology to ensure the right parts are in the right locations at the right time based on historical and predictive data from the airlines and OEMs. GE also provides the management planning and logistics support for an airline's spare parts requirements.

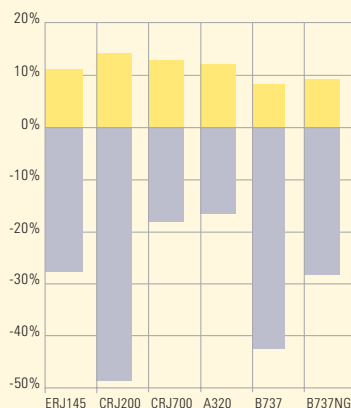
A third party handles the parts repair process or airlines can oversee the repair process in-house. The airline ends up paying a predictable, fixed cost per flight hour. The annual cost savings can be in the millions of dollars and service-level improvements are typically 10-15%.

What's more, the service comes with a performance guarantee. GE will ensure that the right part will be at the line station based on the airline's needs.

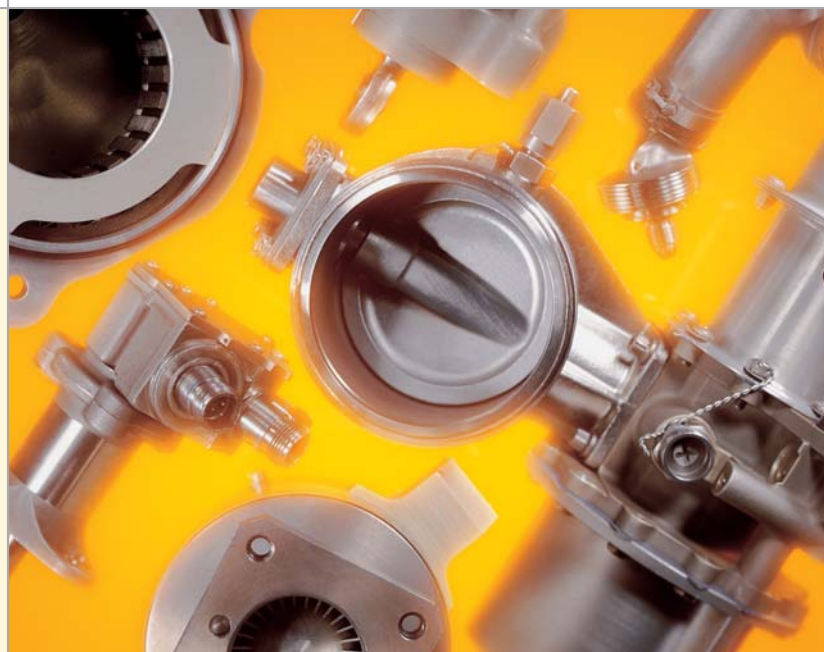
Mesa Air Group signed on as a customer of the new service in June for its Bombardier CRJ200® fleet. "This service will allow Mesa to dramatically reduce the capital we have already committed in our spare parts inventory as well as future amounts required to support our planned regional jet growth," said Jonathan Ornstein, Mesa's Chairman and CEO. "Furthermore, the service provides Mesa with predictable and low costs for the repair and provisioning of our parts inventory, and it also guarantees higher levels of service reliability than we experience today."

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Inventory optimization results



The Aircraft Component Management service helps improve service levels (top) and reduce inventory (bottom), helping airlines save money.



Finding Flaws: Eddy Current Technology Scrutinizes Materials Integrity

Eddy current inspection technology utilizes the principles of conductivity to measure and test various materials and components in aerospace production and repair environments. A material having a high conductivity such as copper will permit “swirling” or eddy currents to flow more readily than a low-conductivity material.



An electrical current is introduced by eddy current probes into a coil that is brought in close proximity with a conducting surface. By measuring the conductivity patterns of eddy currents as they flow across a test material, eddy current-based instruments can detect cracks, corrosion and finished surface flaws that may create excess friction in engine applications.

Protective coating thickness and heat treatments can be verified by eddy current probes, which also can detect in-service heat damage on materials such as aerospace alloys. Probes can be used to evaluate the structural integrity of aircraft by detecting defects around fastener holes with the fastener still in place, or by accessing extremely small inspection areas.

Automated eddy current instruments can detect very small surface cracks or flaws in wheels as well.

GE offers the latest technology in eddy current inspection products and applications through GE Inspection Technologies which recently acquired Hocking NDT (Non-Destructive Testing), a recognized global leader and innovator in eddy current products for over 30 years.

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CFM Eyes Future on Eve of 30th Anniversary

In 1974, GE and Snecma Moteurs signed an agreement that would help change the course of commercial aviation. That agreement formally launched CFM International (CFM) as a 50/50 joint company.

Today, the CFM® product line serves as the industry benchmark with engines that stay on wing longer, are more reliable, are more cost-effective to maintain and have the lowest overall cost of ownership of any engine in this thrust class.

More than 14,200 CFM56® engines have been delivered to 392 customers around the globe. It's a remarkable legacy on the eve of CFM's 30th anniversary.

“CFM56 engines have become the backbone of the world's single-aisle fleet,” said Pierre Fabre, president and CEO of CFM International. “We're just getting

started. The relationship between Snecma and GE has never been better and their commitment to CFM has never been stronger.”



CFM's commitment to continual reinvestment is helping customers lower operating costs with technology such as CFM56-3 Advanced Upgrade and CFM56-5C/P. Technologies developed as part of Project TECH56 are being used in the near-term to develop the next generation of upgrades that will enter service in the next three to five years. CFM is evaluating a technology insertion program for the CFM56-5B and CFM56-7B and expects to make a launch decision later this year.

“CFM did not come this far in 30 years by being complacent,” said Fabre. “Whatever the future brings, the GE/Snecma team is making sure we'll be ready for it.”

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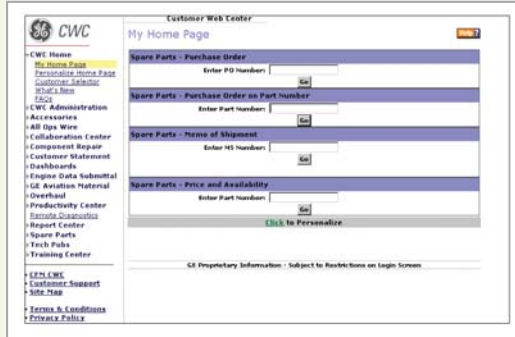
CWC > productivity tip

> Customizing Your Spare Parts Home Page

Did you know that you can personalize your Spare Parts Home Page? Many of our users go to the CWC for specific information every day. It may be price and availability or it may be the status of a purchase order. We offer many different options that can appear on your home page so you do not have to go through any extra steps to get the information you need.

Here are the steps to follow after you log in:

- > CWC Home
- > Personalize Home Page
- > Select up to 4 items
- > Hit the Save button at the bottom



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The four items that you select will now appear on your home page each time you log in, allowing you to access the information quickly and easily.

Spare Parts *continued from page 2*

Canadian low-fare carrier WestJet, among other airlines, relies on the proprietary inventory optimization methods to plan its rotables and repairables requirements for its growing fleet of Boeing Next Generation® 737® aircraft.

“There is an opportunity for low-cost carriers, regional carriers and mainline carriers in the U.S., Europe and elsewhere to lower their capital expenditures and save money,” said Morris.

The Aircraft Component Management service is available for Airbus A320®, Boeing 737NG, Bombardier CRJ™ and Embraer ERJ™ aircraft types.

The purpose of *Service Solutions* is to enhance communication with our customers. Please contact us if we at GE Engine Services can be of further service to you.

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