



*FOREVER FORWARD*

***INDEPENDENT  
GLOBAL LEADER  
IN MATURE ENGINE  
MAINTENANCE***



CTS Engines is a global leader in mature jet engine maintenance. Our mission is to keep our customers' engines flying longer, more reliably and more cost-effectively than any other MRO in the world.

## OUR Mission

## OUR Story



### ORIGIN STORY

CTS Engines is an independent MRO with an impressive growth story. Started in 2002 as Complete Turbine Services with humble beginnings in a small garage next to Fort Lauderdale-Hollywood International Airport, CTS Engines has emerged 20 years later as global leader in mature jet engine maintenance.

In the early days of inception, armed with a deep understanding of our customers' needs and the drive to become an industry leader, CTS began to build a vast network of supporting partners and an expert team. With a focus on developing our core capabilities, we concentrated on hospital shop visits while providing outstanding field services to our customers. CTS Engines was rewiring up for its journey of growth.

Over the past decade CTS Engines has made significant investments in our facility, capabilities, and team to ensure the quality of our services meets and exceeds the expectations of the world-class MRO provider we are today. With highly trained and skilled technicians and a leadership team with over 150 years of combined experience in engine MRO, we are proud of our progress and accomplishments.

Today, CTS Engines supports some of the most demanding fleets and operations in the world. This includes growing commercial airlines with a special focus on cargo and military support programs. CTS Engines is dedicated to our customers and since 2002 we have built our reputation on the ability to deliver high-quality cost-effective solutions for engine maintenance that continue to power their success.



# OUR Leadership



CTS Engines understands the benefit and importance of building an effective leadership team. Every executive leader has deep subject matter knowledge with expertise acquired from various facets of the industry including airlines, MROs and OEMs. With over 150 years of combined engine MRO experience our executive leaders define the corporate strategy, and with strong communication ensure we meet our organizational goals

and customer expectations. Our leadership is aspirational and creates an environment that inspires engagement at a personal level to facilitate the growth and development of our team so they can become fully immersed in the achievement of our mission. Connect with one of our leaders today to experience the CTS difference.

# OUR Team



At CTS Engines we understand that people are our most important asset and our strength starts with our team. This ethos creates a dynamic learning environment where skilled technicians are provided with continuous training, and there are opportunities for growth and advancement. Our knowledgeable supply chain department that is led by an experienced management team who leverages their industry relationships with a reputable network of business partners to ensure high-quality results. There are a range of skill sets within

every department with a clearly defined roadmap to support the development of our team members.

CTS Engines maintains a focus on diversity and inclusion, and we understand the importance of reflecting this within our team. We are committed to the education, advancement and equality of all those aspiring to develop a career in the aerospace industry, and we are dedicated to supporting all of our team members regardless of race, color, age, religion, national origin and sexual orientation seeking a career with CTS Engines.

**CTS ENGINES HAS BUILT ITS REPUTATION ON  
PROVIDING FLEXIBLE, COST-EFFECTIVE SOLUTIONS  
THAT DELIVER HIGH QUALITY RESULTS ENSURING  
THE LONGEST LIFE FOR YOUR ENGINES**

— Vesa Paukkeri, CEO



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## OUR Capabilities



### FULL MRO OVERHAUL SERVICE

- Complete engine disassembly and assembly
- Full cleaning line consisting of OEM chemical and mechanical cleaning methods
- Detailed part inspection capabilities
- Non-Destructive Testing (NDT) including FPI, ECI, USI
- Part dimensional inspection using Coordinate Measuring Machine (CMM)

CTS Engines provides complete turbine services for the full restoration of an engine's gas path. This includes the overhaul of the compressor, combustor and turbine. We understand that mature engines need specialized care and that costs can increase over the life of engine. Following a fully detailed and documented evaluation of your engine by our highly skilled technicians and confirming the maintenance required, CTS Engines technical sales and engineering teams will provide flexible tailored solutions that meet your operational and

- HPC and HPT high speed blade tip grinding using High Speed Grinder (HSG)
- HPC stator cases and HPT shroud grinding using high-speed Vertical Machining Center (VMC)
- Static and dynamic balancing of disks, spools, and rotors (LPT, HPT, HPC, LPC)
- Engine return-to-service testing

budgetary requirements. Our experienced team can address the unique needs of each operator ranging (including but not limited) from module swaps, addressing lease return requirements, sophisticated phase-out programs, or if you are seeking a long-term business partner for programmatic support, CTS Engines is the mature engine leader you can count on to deliver high quality cost-effective results that ensure the longest life of your engine.

### ENGINE RETURN-TO-SERVICE TESTING

We are committed to discovering ways to lower our customers per cycle engine costs.

- Maintenance and overhead minimized through partnerships
- Enhanced revenue generation through combined special services
- Truly independent and confidential service objectives to reduce cost, turnaround time, and customer satisfaction
- Highly trained, professional, and quality-minded technical staff and technicians
- Immediate field service response AOG situations
- Customer-oriented technicians and staff experienced with both airframe and engines
- One-stop shop for all your turbine engine technical requirements and support

# OUR MRO Solutions



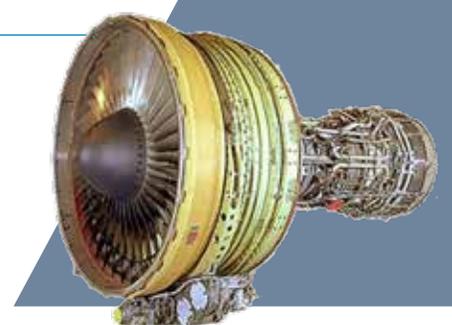
## CF6-50

The CF6-50 was designed by General Electric to power the DC10-30 series aircraft. It was 1969 and the dawn of the widebody era. The airline industry was expanding quickly. A derivative of the CF6-6, with 46,000-54,000 pounds of thrust, the reliability and fuel efficiency of this engine type drove market demand and more versions were developed to support the A300 and B747. Today this engine still powers the US Government's E4-B program, as well as the United States Airforce KC-10s. We proudly support these operators and this legacy engine type.



## CF6-80A

The CF6-80A was developed by General Electric to power the B767 and A310 model aircraft. Developed as an advanced model of the CF6 series of engines in the late 1970's, it powered these two twinjets and has a thrust rating of 48,000-55,000 pounds of thrust. This engine entered service in the early 1980's and was rated for ETOPS operations. The CF6-80A still powers a segment of the widebody B767 and A310 fleets still in operation today. CTS Engines remains one of the only MROs to support this legacy engine type and we proudly maintain these engines for multiple customers.



## CF6-80C2

The CF6-80C2 was developed by General Electric and is currently certified on 12 commercial and military widebody aircraft models. The CF6-80C2 first entered revenue service in 1985, and since its debut has accumulated over 200 million in-service flight hours. With 63,500 pounds of thrust, and technical innovations that led to increased reliability, lower fuel burn and a longer life, the CF6-80C2 was the first with major changes to the configuration since the CF6-50 and was a defining point for GE in achieving significant market share. The continued growth of the cargo market has ensured the sustained operation of the CF6-80C2 for many years to come and today we proudly support multiple operators of this engine type.



## PW2000

The PW2000 was developed by Pratt & Whitney to power the 757 entering into service in 1984. With 37,000-43,000 pounds of thrust, the technical innovations of this engine type delivered high reliability, low maintenance costs resulting in unparalleled performance at the time. It was also the first engine to offer electronic engine control, also known as FADEC (Full-Authority Digital Electronic Control). With more than 26 million hours of service, the PW2000 is ETOPS certified and can meet the demands of both short and long-haul operations. CTS Engines is proud to offer full-service MRO capabilities for PW2000 operators.



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## OUR Test Stand



CTS Engines is one of the only independent engine MRO providers to offer full return-to-service testing as part of our overall maintenance. Located in Jupiter, Florida, the engine test facility is located on 47 acres of land and is comprised of a test stand, operational control building with over 800 live data feeds, an engine prep/de-prep building, and a 40,000 gallon fuel farm. This greenfield project was erected in 2013 and was correlated by GE for CF6-80C2 in 2014. This test site allows CTS to deliver high thrust return-to-service testing to our customers.

We operate an outdoor test stand rated at 155,000 pounds of thrust, among the very largest in the world and capable of

testing every engine in commercial operation today. At its test stand, CTS can perform return-to-service tests on the CF6-50, CF6-80A, CF6-80C, and PW2000. In addition, the company has performed development tests on the CFM56-7B, GENx-2B, LEAP-1A, and LEAP-1B. The company's outdoor test stand was designed to produce the same level of data quality as OEM production test stands.

In 2022 CTS Engines will increase our test capacity with the addition of a Turbulence Control System (TCS) which greatly increases the performance test envelop during high-wind conditions.

## OUR Field Services



We are also a recognized leader in the provision of engine field services in support of our contracted customers. Our field service support includes both FAA and EASA 145 repair station certifications for the General Electric CF6-50, CF6-80A, CF80C2, and PW2000.

CTS Engines' field service capabilities include QEC conversions/changes, fan case changes, blade changes, hot section inspections, blade blending, borescope inspections, module swaps, engine lease return inspections/evaluations, NDI/NDT, and many other maintenance services.



# OUR In-House Repair



Over the past several years, the company has invested millions of dollars in Lean principles and related enterprise resource planning systems, resulting in improved turnaround times, better engine performance, and less waste. The engine service center maintains comprehensive, in-house overhaul capabilities, and is the only full-service MRO facility in North America that is solely focused on mature engine maintenance.

Our in-house capabilities translate to cost-effective solutions that positively impact TAT. We offer a broad range of piece part repairs for a variety of part groups including but not limited to LLP's, seals, shrouds, panels, liners, fan blades, frames, cases, engine mounts, gearboxes and small structural parts. We are proud of our continuously growing in-house repairs and the added commercial value this delivers to our customers.

- 🌀 Cleaning
- 🌀 Detailed Inspection
- 🌀 Dimensional Inspection
- 🌀 FPI, ECI, USI
- 🌀 Blending
- 🌀 Shot peening
- 🌀 Composite Repair
- 🌀 Welding
- 🌀 Machining
- 🌀 Heat Treat
- 🌀 Painting



**20+**  
Years Experience

**650+**  
Engines Serviced

**60+**  
Customers Served



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# A Passion for Detail. A Commitment to Excellence.



## OUR Commitments

CTS Engines is committed to our valued partners with mature engines. Our commitment to excellence is evident in our exceptional amount of repeat business, long-term customer relationships, and outstanding reputation for customer

- Our commitment to lowering our customer's per cycle engine mx costs
- Our commitment to producing quality results for our customers in second to none and our technicians are among the industry's most skilled, knowledgeable and highly trained mx professionals

satisfaction. This commitment underpins all aspects of our organizational structure and company philosophy forever forward.

- Our commitment to the maintenance of our Quality Management System and Certification status.
- Our commitment to true partnership and collaboration with our long-term customers.



## OUR Culture

At CTS Engines quality is our culture, and we have built our business on our core values of trust, integrity, honor and quality services all performed to the highest standards. These values are at the heart of our foundation and guide our business focus and goals every day. They also firmly shape our organizational culture and lead to a work environment that is engaging, collaborative and nurturing.

Our leadership creates an environment that inspires engagement at a personal level and facilitates the growth and development of our team so they can become fully immersed in the achievement of our organizational goals. CTS Engines depends on our customers, and we strive to both meet and exceed their expectations through our accredited system of continuous improvement.

# OUR Certificates



At CTS Engines, Forever Forward is not just a slogan; it's a way of life and the essence of our corporate culture. CTS Engines is committed to excellence in the maintenance of our Quality Management System and Certification status. We are absolutely

passionate about being the best at what we do, and the up-to-the-minute training and technical expertise of our dedicated service professionals is second to none.

- FAA Air Agency Certificate
- EASA Approval Certificate
- Republic of Korea Approved Aircraft Maintenance Organization Certificate
- Bahrain Aircraft Maintenance Organization Approval Certificate
- ISO 9001:2015 and AS9110:2016
- Republic of Panama Approved Aircraft Maintenance Organization Certificate

# OUR Quality



## PERFORMANCE YOU CAN COUNT ON

At CTS Engines we believe that there is no second best. Quality is our number one priority, perfection is the standard, and we are working forever forward to improve and implement goals for continuous improvement of our Quality Management System. Quality and safety form the management principles of CTS Engines.

Our technicians are diversified, highly skilled and held to the

highest standards of performance. Each is required to go through the industry's most intensive and up-to-date training and certification programs, either through OEM and/or MRO/OJT training. Furthermore, our technicians are cross trained to meet the technical demands of both Airframe & Powerplant, ensuring our valued customers' complete satisfaction whether they are in the shop or in the field.

## RESULTS YOU CAN MEASURE

CTS Engines also implements a 145 repair station tracking system to ensure quality documentation of the work accomplished. This system also controls tracking of inventory, calibrated tooling, vendors, labor, non-routines, and many other quality functions to ensure accurate and complete data.

CTS Engines is dedicated to excellence and quality, and to keeping up with the latest innovations available in tooling, such as DVD borescope measurement equipment, digital vibration equipment, digital measurement instruments, and many other types of NDI/NDT inspection tooling. We always ensure top quality performance for you, our valued customer.

- MRO Capabilities**  
CF6-80C2, CF6-80A, CF6-50 & PW2000
- Commercial Operators & Owners**  
Widebody Cargo & Passenger Aircraft
- Defense Contractors**  
Sustainable Military Support Programs



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FAA Repair Agency No. KOWR728X / EASA.145.555  
ISO9001:2015 & AS9110:2016 Cert No. 18180

