



The Power of Flight



# CFM Technical Training 2016 Course Catalog

# CFM International

## CFM56 & LEAP: Product of Advanced Technology

Every component of the advanced CFM56 & LEAP powerplant is the result of millions of dollars in research investment, hundreds of engineering minds, and hours of rigorous testing. CFM's industry leadership is thanks to the backing of our two parent companies, Safran Aircraft Engines and GE-Aviation.

They are both impressive forces of technological expertise. Safran Aircraft Engines engineers have built up a portfolio of over 5,000 patents. GE employs 27,000 technologists and 2,600 scientists at its four global research centers.

Determined to build on our legacy of technology, CFM is looking to the future as our researchers advance technologies like aerodynamics and combustion for our next-generation engine.

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## CFM Customer Training Services

CFM's vision and goals focus on fulfilling the training needs of each customer by providing world-class training instructors and facilities to ensure that the most current technical information is available for each of our products. We strive to quickly respond to training needs on time and as expected—all with the end goal of improving engine reliability through state-of-the-art maintenance instruction.

Our promise is to continue to employ the most modern teaching methods using hands-on applications and instructions on products and tooling while offering new and innovative digitized solutions to you—our customer.

# Global Footprint



## CTEC

GE Aviation  
123 Merchant Street  
Cincinnati, Ohio  
45246 – USA

The Customer Technical Education Center (CTEC), located just outside Cincinnati, Ohio, provides technical training to customer mechanics, powerplant engineers, GE employees and other representatives on a daily basis to help ensure fleet reliability. More than 4,000 customer students pass through the doors of CTEC each year.

CTEC employs a staff of world-class engine training experts who not only deliver technical training, but also real-world application instructions for each of the GE and CFM International engine programs. The following programs are supported by CTEC.

CFM56-2/3/7 , LEAP-1A and LEAP-1B

CTEC also delivers regular customer tours of the training facility as part of its support for customers. In addition, monthly “Voice of the Customer” lunches are held to better understand customer training and technical needs. Onsite classes are also available to customers who desire a private course with a large number of their mechanics.



## CTC

Safran Aircraft Engines, Melun – France  
Site de Melun-Montereau  
Aerodrome de Villaroche  
2 chemin de Viercy 77019 Melun

The CFM Customer Training Center (CTC) is a world-class training facility located 50 kilometers southeast of Paris, France. The 2,200 m<sup>2</sup> state-of-the-art building consists of administrative offices, seven CFM engine shop bays and seven classrooms.

Adjacent to Safran Product & Customer Support, the CFM Training Center – through its experienced instructors – delivers Maintenance training for LEAP 1A, LEAP 1B, CFM56-3/-5/-7 EASA Part 147 approved.

CTC is fully responsible for CFM56-5 maintenance and shop training. More than 1,200 students per year, CFM Customers and Safran Aircraft Engines employees, receive ATA 104 technical training which can be also customized to their needs – or delivered at Customer's site in certain conditions.

CTC Subject Matter Experts keep close contact with Safran/CFM Product Support Engineers to enhance training courses with the latest technical upgrades and modifications. CTC courses developers and graphics contribute to high quality Computer Based Training presentations that are shown within classrooms during theoretical sessions.

# Global Footprint



## AEMTC

Chengdu, Sichuan – China

The Aero Engine Maintenance Training Center (AEMTC)—a cooperative training institute comprised of Chinese partners, Snecma, CFM International, and GE Aviation—specializes in maintenance training for GE and CFM commercial aircraft engines.

Since 1996, the center has trained more than 6,000 students from airlines throughout Asia. Located on the campus of the Civil Aviation Flight University of China (CAFUC), AEMTC is a two-story building containing six classrooms and a shop with six training engines. There are four instructors who conduct training classes for CFM56-3, CFM56-5B, CFM56-7B, and CF6-80C2 line maintenance, borescope inspection, and advanced engine systems.

AEMTC keeps close ties with the CFM International training facilities at GE Aviation (CTEC) and Safran Aircraft Engines (CTC) by sharing the same training materials, quality control measurements and instructor best practices. AEMTC also keeps close contact with the GE/CFM Field Service team in China in order to tailor special training and seminars to an airline's requirements.



## CFMAESSA

Aerospace Park

Rajiv Gandhi Int'l Airport Shamshabad  
Hyderabad 500409 Andhra Pradesh  
India

CFMAESSA is the new addition to the CFM International initiative for training customers in the Indian Subcontinent, Southeast Asia, Middle East. The training center is located at Rajiv Gandhi International Airport, Hyderabad, India.

The Centre was inaugurated in March 2010 and provides courses on Line and Base Maintenance, General Familiarization, Borescope Inspection, and Remote Diagnostic of CFM56-5A/5B and CFM56-7B engines. There are two engines available for trainees to experience hands-on engine maintenance.

The facility is approved by DGCA India, and approval from EASA has been processed.

This operation keeps close contact with customer training centers in France and the USA. The training material, quality control and best practices are the same as those followed in the USA and France.



# ATA 104 Specifications

All CFM courses comply with ATA 104 Specifications

## Level I General Familiarization

Personnel must be familiar with current equipment and have a general knowledge of turbine-powered transport aircraft. Level I provides a brief overview of the airframe, systems, and powerplant as outlined in the Systems Description Section of the Aircraft Maintenance Manual.

## Level II Ramp and Transit

Personnel must be familiar with turbine-powered transport aircraft, digital electronic equipment, and have experience in ramp, transit and turnaround activity. Level II provides a basic system overview—a description of controls, indicators, and principal components, including their locations and practical training on servicing and minor troubleshooting.

## Level III Line and Base Maintenance Training

In addition to requirements for levels I and II, personnel attending level III training should possess the knowledge and experience required to maintain turbine-powered transport aircraft. Level III

provides a detailed description, operation, component location, removal/installation, BITE and troubleshooting procedures to maintenance manual level.

## Level IV Specialized Training

Personnel must have considerable experience in the field in which training will be received. Level IV provides a detailed description, component location, in-depth troubleshooting, adjustment, test procedures, rigging, engine run-up, in-depth use of wiring diagrams, schematics and engineering data. Entry level is defined by subject matter.

## Level V Component Overhaul Training

Personnel must meet prerequisites established by the vendor. Specialized maintenance/overhaul training is conducted by airframe/engine/avionics manufacturers and/or their suppliers and/or airlines to a component maintenance manual level. Entry level is defined by subject matter.



# Course and Service Matrix by Training Center

Training Center	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA
Engine Models	General Familiarization				Advanced Engine Systems				Line Maintenance				Academic Line Maintenance				Borescope for Inspectors			
LEAP 1A		X							X	X			X	X			X	X		
LEAP 1B		X							X				X				X			
CFM56-2/F108	X	X							X	X			X				X			
CFM56-3	X	X	X						X	X	X		X	X			X	X	X	
CFM56-5A	X	X		X		X				X		X		X		X		X		X
CFM56-5B	X	X	X	X		X	X			X	X	X		X		X		X	X	X
CFM56-5C	X	X								X				X				X		
CFM56-7	X	X	X	X		X	X		X	X	X	X	X	X		X	X	X	X	X

Training Center	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA				
Engine Models	Advanced Borescope for Inspectors				Engine Removal & Installation				3 Module Removal & Installation				10 Module Removal & Installation				Engine Top Case				Engine Technical Management			
LEAP 1A					X																			
LEAP 1B					X																			
CFM56-2/F108		X															X							
CFM56-3		X								X				X			X	X		X				
CFM56-5A		X																						
CFM56-5B		X								X							X			X				
CFM56-5C		X																						
CFM56-7		X			X												X			X				

Training Center	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA	CTEC	CTC	AEMTC	CFMAESSA				
Engine Models	Overhaul Performance Tests				Linipot				Fan Trim Balance				Advanced Line Maintenance				Borescope Blade Blend				Diagnostics Trends Interpretation			
LEAP 1A																	X			X				
LEAP 1B																	X			X				
CFM56-2/F108																	X			X				
CFM56-3						X				X							X			X				
CFM56-5A						X				X				X		X				X				
CFM56-5B		X				X				X				X		X				X				
CFM56-5C						X				X										X				
CFM56-7						X				X				X		X	X			X				

# CFM Courses - CTEC

## CFM56 General Familiarization

This ATA 104 level I course is available on CD-ROM. This course is an academic training session, designed for personnel who require a general knowledge of the basic engine construction features, airflows, engine systems and accessories.

*Normal time to complete the CD-ROM General Familiarization Course is approximately 4.0 hours.  
Availability: CFM56-7, CFM56-3, CFM56-2, LEAP-1A, and LEAP-1B late 2016.*

## CFM56 Line Maintenance

4 days Class size: 12

This ATA 104 level III course provides the information necessary to perform engine line maintenance. The course also provides hands-on practice in the removal and installation of Line Replaceable Units at CTEC.

*Available for CFM56-7, CFM56-3, CFM56-2, LEAP-1A and LEAP-1B late 2016.*

## .CFM56 Basic Borescope for Inspectors

2 days Class size: 6

This ATA 104 level IV course provides the information necessary to understand the engine basic borescope inspection of the CFM56 engine. This course is recommended for non-experienced borescope inspectors and quality personnel.

*Available for CFM56-7, CFM56-3, CFM56-2, LEAP-1A and LEAP-1B late 2016.*

**\* This course must be purchased at the current training rate, or training entitlements may be used at a three times (3X) rate if training entitlements are available to the customer.**

## CFM56 Diagnostics \*

Class size : 10 students

1 day

Target group : Engineering Team, Line Maintenance troubleshooting Team

Available for all models

This course provides an advanced suite of tools through Website enhancing Customer's Engine Condition Monitoring experience. This course does not include trends interpretation.

## CFM56 Trends Interpretation \*

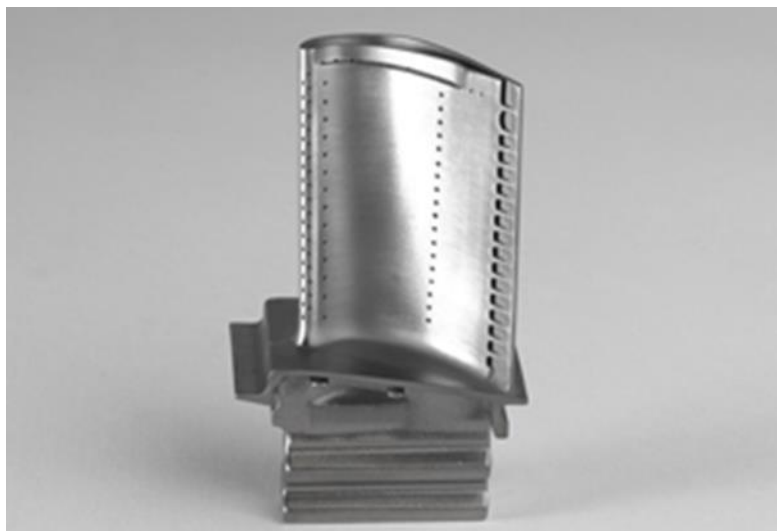
Class size : 10 students

3 days

Target group : Engineering Team, Line Maintenance troubleshooting Team

Available for all programs

Following Diagnostics course, this presentation provides knowledge on how to read and interpret trends in order to analyse the interactions of various operating parameters. Root cause analysis can be developed for the shifts noted.





# CFM Courses - CTEC

## CFM56 Borescope Blade Blend\*

1 day Class size: 4

This ATA 104 level IV course is an academic and practical training session designed for line maintenance technicians and supervisory personnel.

The course consists of blade blend procedure on the CFM56-7 series engine. The hands-on portion of this course consists of borescope blend equipment and use of maintenance manuals.

*Available for CFM56-7, CFM56-3 and CFM56-2, LEAP-1A and LEAP-2B late 2016*

**\*\*This course is not eligible for use of training credits allowance. This course must be purchased at the current training rate unless specifically called out in the customer contract.**

**\* This course must be purchased at the current training rate, or training entitlements may be used at a three times (3X) rate if training entitlements are available to the customer.**

## CFM56 Engine Removal & Installation

2 days Class size: 6

This ATA 104 level IV course is an academic and practical training session designed for the information necessary to remove and install a CFM56 engine. The course also provides hands-on practice for CFM56-7 engine removal and installation.

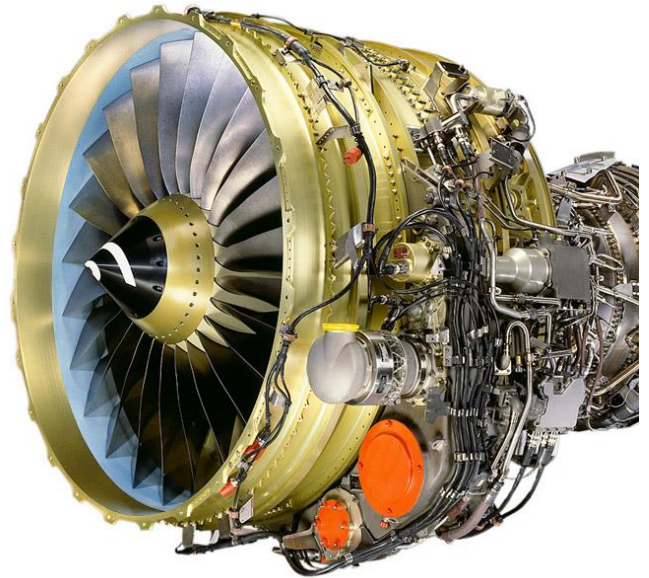
*Available for the CFM56-7, LEAP-1A late 2016 and LEAP-2B in 2017.*

## CFM56 Engine Top Case \*\*

4 days Class size: 6

This ATA 104 level IV course is an academic and practical training session designed to provide the information necessary to remove and install the stator cases and perform HPC blade replacement on a CFM56 engine.

*Available for CFM56-7, CFM56-3 and CFM56-2 engine models.*



# CFM Courses - CTC

## CFM56 & LEAP General Familiarization

Upon Customer's request, not scheduled, minimum attendance 3 students, max 12

One day

Target group: all personnel requiring a general engine knowledge

Available for all CFM56 engine models and LEAP  
This ATA 104 level 1 course provides a general overview of the construction, systems operation and the main concept of a CFM56 or LEAP.

USB Key can be a substitute to classroom session before attending a Line Maintenance course

## CFM56 & LEAP

### Powerplant Line & Base Maintenance

EASA Part 147 approved

Class size : 12 students for all -5 engine family, And LEAP 1A

8 students for CFM56-7B

Five days

Target group : Maintenance Mechanics

Available for CFM56-5A/5B, -5C, LEAP 1A, -7B

This ATA 104 level 3, Part 66 appendix 3, EASA Part 147 approved course provides the information necessary to perform engine maintenance. The course also provides hands-on practice in the removal & installation of Line Replaceable Units.

If chosen by trainee, EASA Part 147 test and practical assessment at end of course.

*Prerequisite recommended: General Familiarization*

## CFM56 Line & Base Maintenance

Class size : 8 students

Four days

Target group : Maintenance Mechanics

Available for CFM56-3, CFM56-2A/B

This ATA 104 level 3 course provides the information necessary to perform engine maintenance. The course also provides hands-on practice in the removal & installation of Line Replaceable Units.

Practice is conducted on CFM56-3 engine.

*Prerequisite recommended: General Familiarization*



# CFM Courses - CTC

## CFM56 Advanced Line & Base Maintenance

Class size : 8 students

Eight days

Target group : Instructors, Experienced CFM Mechanics

Available for CFM56-5B, -7B

This ATA 104 level 4 course provides the information necessary to perform in depth engine line maintenance. The course also provides hands-on practice in the removal & installation of Line Replaceable Units.

*Prerequisite: Powerplant Line & Base Maintenance*

## CFM56 Advanced Engine Systems

Class size : 12 students

Four days

Target group : Instructors, Engineering Team

Available for CFM56-5B, -7B

This ATA 104 level 4 course provides the information necessary to understand in depth engine systems and aircraft interface philosophies. Theory only, No removal & installation of LRUs.

*Prerequisite: Powerplant Line & Base Maintenance*

## CFM56 & LEAP Borescope Inspection

Class size : 6 students

Two days

Target group : Non-experienced CFM Borescope Inspectors, Quality personnel

Available for CFM56-5A/B, -5C, -7B, -3

LEAP 1A

This ATA 104 level 4 course provides the information necessary to understand the engine basic borescope inspection, describes the skills of borescope manipulation but also specific CFM56 borescope inspection procedures.

*Prerequisite: Knowledge of Borescope Inspection basics*

## CFM56 Proficiency in Borescope Inspection \*

Class size : 6 students

Five days (Theory 2 days, Practice 3 days)

Target group : Borescope Inspectors, NDT Inspectors, Quality personnel

Available for all CFM56

This ATA 104 level 4 course contributes to getting Inspectors fully skilled.

Based on large range of defects, illustrated with pictures and associated terms, to help with their identification, this course will give a better approach to engine maintenance decisions.

*Prerequisite: Knowledge of Borescope Inspection basics*

**\* This course is not eligible for use of training credits allowance. This course must be purchased at the current Safran training rate.**



# CFM Courses - CTC

## CFM56 Fan Trim Balance

Class size : 6 students

Two days, Three days if manual

Target group : Line Maintenance & Shop Mechanics

Available for CFM56-5A/B, -5C, -7B, -3

This ATA 104 level 4 course provides detailed information on tooling and related computerized procedures in order to solve vibration problems.

*Prerequisite recommended: Powerplant Line & Base Maintenance*

## CFM56 Linipot

Class size : 8 students

Three days

Target group : Engineering Shop Team

Available for CFM56-5A/B, -5C, -7B, -3

This ATA 104 level 4 course provides details on the procedure for the use of linipot tool 856A1360 and data analysis of the linipot results

## CFM56 Top Case

Class size : 6 students

Four days

Target group : Shop Mechanics

Available for CFM56-5B, -3

This ATA 104 level 4 course provides practical experience necessary to perform the removal and installation of the core engine upper front & rear stator cases in order to access the HPC rotor blades

## CFM56 Overhaul Performance Tests

Class size : 12 students

Three days

Target group : Engineering Team, Test Bench Team

Available for CFM56-5B

This ATA 104 level 4 course provides a detailed description of acceptance test procedures after engine overhaul. An in-depth knowledge of systems is provided to help understand test results and correct problem in the event of a failed test or computation





# CFM Courses - CTC

## CFM56 Diagnostics (suspended at the moment)

Class size : 12 students

One day

Target group : Engineering Team, Line Maintenance troubleshooting Team

Available for all CFM56

This course provides an advanced suite of tools through Website enhancing Customer's Engine Condition Monitoring experience. This course does not include trends interpretation.

## CFM56 Trends Interpretation

Class size : 12 students

One day

Target group : Engineering Team, Line Maintenance troubleshooting Team

Available for all CFM56

Following Diagnostics course, this presentation provides knowledge on how to read and interpret trends in order to analyze the interactions of various operating parameters. Root cause analysis can be developed for the shifts noted.

No certificate delivered at end of presentation.

## CFM56 Three Major Modules Removal & Installation

Class size : 8 students

Eight days

Target group : Shop mechanics

Available for CFM56-3, -5B

This ATA 104 level 4 course provides practical experience necessary for removal and installation of the Fan, Core, Low Pressure Turbine Major Modules in accordance with the CFM56 Engine Shop Manual.

*Prerequisite recommended: Powerplant Line & Base Maintenance course*

## CFM56 Ten Minor Modules Removal & Installation

Class size : 8 students

Fifteen days

Target group : Shop mechanics

Available for CFM56-3, -5B

This ATA 104 level 4 course provides practical experience necessary to perform horizontal removal and installation of Ten of the seventeen engine modules in accordance with the CFM56 Engine Shop Manual

*Prerequisite recommended: Powerplant Line & Base Maintenance course*

**\*\*This course is not eligible for use of training credits allowance. This course must be purchased at the current training rate unless specifically called out in the customer contract.**

**\* This course must be purchased at the current training rate, or training entitlements may be used at a three times (3X) rate if training entitlements are available to the customer.**

# CFM Courses - AEMTC

## CFM56 Engine Familiarization

ATA Level: 1

Instructors: AEMTC

Class Size: 3-18 students (Upon Customer's request, not scheduled)

Duration: 3 Days

Course Description: A CFM56 series engine course that provides academic maintenance training. The course is for Aviation Maintenance Technicians, supervisors, managers, and maintenance planners. The course is adaptable to a specific CFM56 engine model. The course includes:

- An overview of the construction features and airflows of the engine.
- An overview in the relationship between engine systems and performance, maintainability, and airflow controls.

Note: In order to take an Engine Familiarization training, the student can (1) participate in the above 4 parts of a regular level 3 line maintenance class, or (2) Take e-Learning course – CFM56-3/-7B General Familiarization Course is now available on CD-ROM. In either case, an Engine Familiarization certificate will be issued. Not scheduled in 2010.

## CFM56 Line Maintenance

ATA Level: 3

Instructors: AEMTC

Class Size: 6-18 students

Course Duration: 5 days

Course description: A CFM56 series engine course that provides academic and hands-on maintenance training. The course is for Aviation Maintenance Technicians, and supervisors. The course is adaptable to a specific engine model or to a generic MEC, FADEC or Non FADEC engines. The course uses the Airplane Maintenance Manual to remove and install engine system components. The course includes: Engine and systems familiarization, component identification exercise, LRU replacement, fan trim balance, nacelle, fault isolation overview and test & adjustments. Who should attend: Aviation Maintenance Technicians, and supervisors.

## CFM56 Borescope Inspection

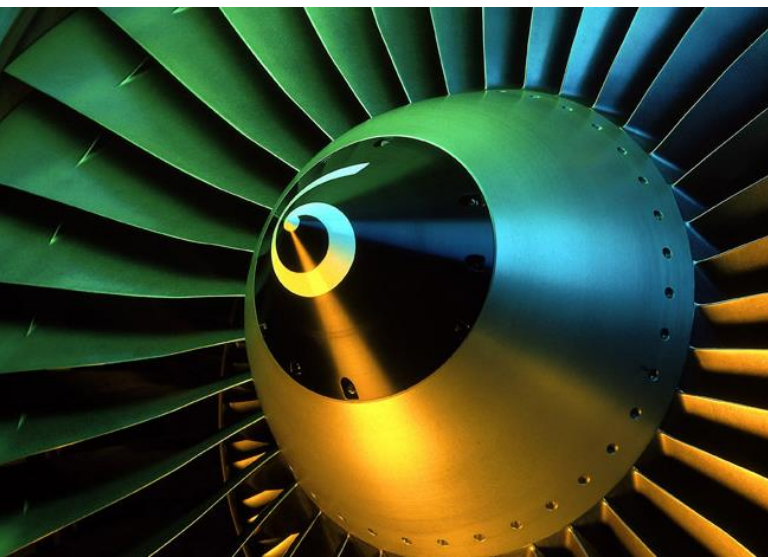
ATA Level: 3

Instructors: AEMTC

Class Size: 4 – 10 students

Course Duration: 2 Days

Course Description: A CFM56 series engine course that provides academic and hands-on maintenance training. The course provides Inspectors, Aviation Maintenance Technicians, and supervisors with engine borescope and inspection methods. The course is adaptable to a specific CFM56 engine model. The course includes: borescope of an engine using the Airplane Maintenance Manual, inspection of engine internal hardware and the use of borescope equipment. Who should attend: Inspectors, Aviation Maintenance Technicians, and supervisors.



# CFM Courses - AEMTC

## CFM56 Advanced Engine Systems \*\*

ATA Level: 4

Instructors: CTEC, CTC, AEMTC

Class Size: 12-50 students

Course Duration: 4 Days

Course Description: CFM56 course that provides academic and maintenance training. The course is for Lead Mechanics, Instructors, and Powerplant Engineers or other personnel needing in-depth engine knowledge. The course is designed for the CFM56 engine. The course includes: Level 4 basic engine and systems, FADEC, fault detection, annunciation and troubleshooting.

Who should attend: Lead mechanics, Instructors, and Powerplant Engineers

Note: Since 2007, most of Advanced Engine Systems(AES) courses were conducted by AEMTC instructors.

## Engine Technical Management

ATA Level: N/A

Instructors: GE

Class Size: 12-50 students

Course Duration: 2 days

Course Description: A 2-day course, which provides students information and examples on how the students can manage aircraft engines more effectively. This course consists of discussions and sample problem in subjects which are important to know and use in managing modern aircraft engines business. These subjects are some of those that many people at successful airlines accept as basic to understanding their jobs, and the jobs of the other people at their airlines. The sample problems use fictitious situations and numbers.

Who Should Attend: Powerplant Engineer, Managers and supervisors.

## CFM56 Diagnostic/ Trends Interpretation \*

ATA Level: N/A

Instructors: GE

Class Size: 12-25 students

Course Durations: 3 days

Course Description: Following Diagnostics course, this 3- day presentation provides knowledge on how to read and interpret trends in order to analyze the interactions of various operating parameters. Root cause analysis can be developed for the shifts noted.

GE certificate delivered at end of presentation and after examination.

Who should Attend: Engineering Team, Line Maintenance troubleshooting Team Available for all CFM56.

Note: This course is conducted in English with Chinese translation.

**\*\*This course is not eligible for use of training credits allowance. This course must be purchased at the current training rate unless specifically called out in the customer contract.**

**\* This course must be purchased at the current training rate, or training entitlements may be used at a three times (3X) rate if training entitlements are available to the customer.**



# CFM Courses - CFMAESSA

## CFM56 General Familiarization

Upon Customer's request, not scheduled, minimum attendance 3 students, max 15

One day

Target group : all personnel requiring a general engine knowledge

Available for CFM56-5A/5B, -7 engine models

This ATA 104 level 1 course provides a general overview of the construction, systems operation and the main concept of a CFM56

CD-ROM can be a substitute to classroom session before attending a Line Maintenance course

## CFM56 Powerplant Line & Base Maintenance

EASA Part 147 approved

Class size : 8

Five days

Target group : Maintenance Mechanics

Available for CFM56-5A/5B, -7B

This ATA 104 level 3, Part 66 appendix 3, EASA Part 147 approved course provides the information necessary to perform engine maintenance. The course also provides hands-on practice in the removal & installation of Line Replaceable Units.

EASA Part 147 test at end of course.

*Prerequisite recommended: General Familiarization*

## CFM56 Academic Powerplant Line & Base Maintenance

Class size : 15 students

Three days (Theory only)

Target group : Maintenance Mechanics

Available for CFM56-5A/5B, -7

This ATA 104 level 3 course provides the information necessary to perform engine maintenance. No hands-on practice in the removal & installation of Line Replaceable Units.

Course usually given at Customer's site.

*Prerequisite recommended: General Familiarization*

## CFM56 Advanced Line & Base Maintenance

Class size : 8 students

Eight days

Target group : Instructors, Experienced CFM Mechanics

Available for CFM56-5B, -7

This ATA 104 level 4 course provides the information necessary to perform in depth engine line maintenance. The course also provides hands-on practice in the removal & installation of Line Replaceable Units.

*Prerequisite: Powerplant Line & Base Maintenance*

*Note: Course conducted using CTC instructors.*

*Customer required to cover all T&L costs.*



# CFM Courses - CFMAESSA

## CFM56 Advanced Engine Systems

Class size : 12 students

Four days

Target group : Instructors, Engineering Team

Available for CFM56-7, -5B

This ATA 104 level 4 course provides the information necessary to understand in depth engine systems and aircraft interface philosophies. Theory only, No removal & installation of LRU's.

*Prerequisite: Powerplant Line & Base Maintenance*

*Note: Course conducted using CTC instructors.*

*Customer required to cover all T&L costs*

## CFM56 Borescope Inspection

Class size : 6 students

Two days

Target group : Non-experienced CFM borescope

Inspectors, Quality personnel

Available for CFM56-5A/B, -7

This ATA 104 level 4 course provides the information necessary to understand the engine basic borescope inspection, describes the skills of borescope manipulation but also specific CFM56 borescope inspection procedures.

*Prerequisite: Knowledge of Borescope Inspection basics*

## CFM56 Diagnostics (suspended at the moment)

Class size : 8 students

One day

Target group : Engineering Team, Line Maintenance troubleshooting Team

Available for all CFM56

This course provides an advanced suite of tools through Website enhancing Customer's Engine Condition Monitoring experience. This course does not include trends interpretation.

## CFM56 Trends Interpretation

Class size : 8 students

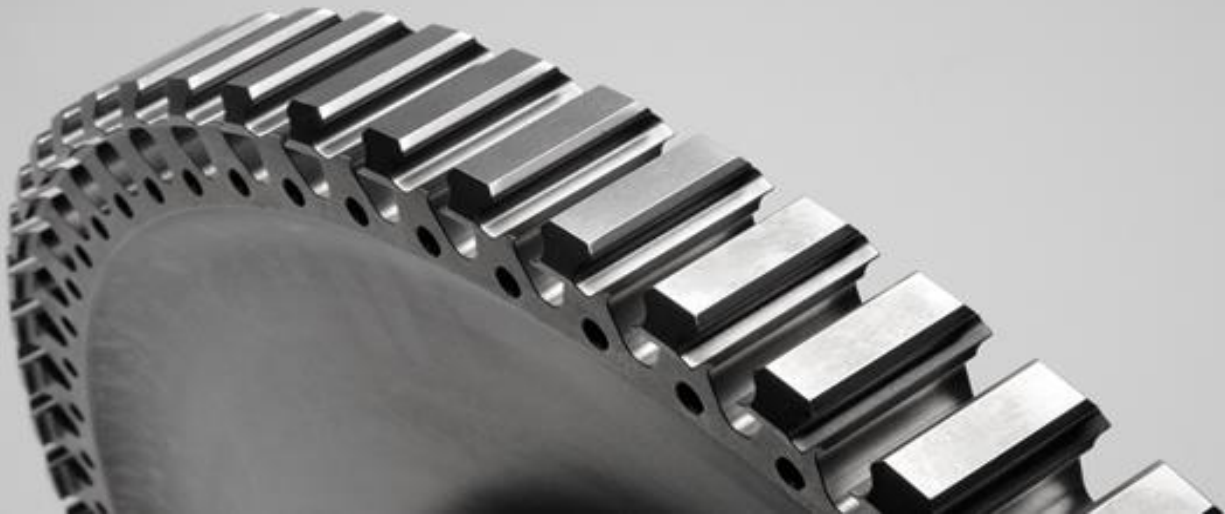
One day

Target group : Engineering Team, Line Maintenance troubleshooting Team

Available for all CFM56

Following Diagnostics course, this presentation provides knowledge on how to read and interpret trends in order to analyze the interactions of various operating parameters. Root cause analysis can be developed for the shifts noted.

No certificate delivered at end of presentation.



# E-learning/Digital Training

To meet the increasing customer demand for training and to help customers reduce engine cost of ownership, GE has developed new on-demand digital training products to deliver vital maintenance information directly to the maintainer. Contact your GE Customer Service Manager to place an order.

## E-learning/Digital Training Course EFAM

These electronic familiarization courses (eFam) provide classroom content on engine architecture and systems via the Web or CD. This enables CFM to provide genuine OEM training to eligible customers who don't have the opportunity to come to our Training Centers. For most product lines, these courses are now prerequisites for any subsequent training at training centers.

## Digital Training Aids (DTAs)

Digital Training Aids are designed to provide the mechanic with information about specific maintenance procedures that have been linked to critical errors. This interactive learning allows the user to view procedures step-by-step or as a continuous video. The cautions surrounding critical steps are highlighted and summarized and the user is tested on these critical steps upon completion. The CDs come in two versions and should be used on a PC. The new Web version is intended to be loaded on the customer's internal intranet for the training of employees in support of CFM engine lines.

## Customer Learning Management Toolkit (CLMT)

Contact your CFM Customer Service Manager for access to CLMT. This program allows direct access to GE training information, so that the customer training coordinator can register students for instructor-led classes, and permits customer personnel to undertake online training with online access to the entire CFM Library of Digital Training Solutions.

Using the CLMT, the customer training coordinator can:

- Access training schedules
- Register students for classes
- Review training records and entitlements (if applicable)



\* Pertains to CTEC only.

# Computer-based Training (CBT)

To meet the increasing customer demand for training and to help customers reduce engine cost-of-ownership, CFM has developed new on-demand digital training products to deliver vital maintenance information directly to the maintainer. CBT can be delivered as a standalone DVD or launched through CFM LMS or customer server.

## Benefits

- Interaction when you need it, so you participate at your convenience
- Provides academic training equivalent to instructor-led courses
- Reduced travel and living costs
- Simple to use
- Improved productivity
- Ideal for refresher training

For more information on this training product, please contact your Customer Support Manager or send your inquiry to:

“CTEC” Cincinnati, Ohio

E-mail: [cts.scheduling@ae.ge.com](mailto:cts.scheduling@ae.ge.com)

Phone: 513-552-3418

“CTC” SAFRAN AIRCRAFT ENGINES, France

E-mail: [training.center@safrangroup.com](mailto:training.center@safrangroup.com)

Phone: 33 1 64 14 80 35





# Class Costs

Our primary training mission is to provide classroom and hands-on instruction to Airline Customers who own and operate CFM International Products. Customers must have a General Terms Agreement (GTA) or other service support contracts allowing them to be eligible to attend training courses.

The GTA or other support agreements will specify if a customer is eligible to receive identified training at no cost and, if so, assign a number of training credits. These credits are usually in units of student days and are deducted based on the length of the course and number of students attending. For example, two students attending a five-day course would deduct 10 student day credits from the customer's training entitlements.

Customers who have used all of their training entitlements, or those whose contract allows for receipt of training but does not provide training credits, may purchase courses at the current training rate.

Some selected courses are not eligible for training credit use. All customers must purchase such courses at the current training rate. Any courses that are not eligible for training credit use will be marked with an asterisk in the previous pages.

For information regarding training eligibility, training credits, or current training rate, please contact your CFM Customer Support Manager (CSM). If you do not have a CSM, please contact the Customer Support Center at 877.GEAE.CSC (432.3272).

CTEC Cincinnati, Ohio contact:

[cts.scheduling@ae.ge.com](mailto:cts.scheduling@ae.ge.com)

CTC (France), contact:

[training.center@safrangroup.com](mailto:training.center@safrangroup.com)





# Course Cancellation

Dear CFM Customer,

The following table depicts CFM Training Centers course cancellation policy and associated fees for customers That schedule *dedicated classes* and provide inadequate notification of cancellation. This policy is being established to ensure “CFM Training Centers” have adequate time provided to backfill lost capacity due to customer cancellations.

Cancellation timing	Long form GTA	Short form GTA
> 45 days	No penalty	No penalty
30-44 days	50% of course entitlements will be deducted from CLMT	50% of standard course fees will be billed
< 29 days	100% of course entitlements will be deducted from CLMT	100% of regular course fees will be billed

## Exclusions

- Policy applies to customer-dedicated classes only. A dedicated class is standalone single customer scheduled course.
- Customer-dedicated classes that are backfilled regardless of timing will have no fees/penalties applied
- This policy is in effect and will be provided to all customer-dedicated classes scheduled on or after January 01, 2012
- This policy applies to courses held at all CFM Training Centers.

As a valued customer, should you have questions or feel the charges have been made in error, please contact appropriate “CFM Training Center” via email or phone as listed below.

“CTEC” Cincinnati, Ohio

E-mail: [cts.scheduling@ae.ge.com](mailto:cts.scheduling@ae.ge.com)

Phone: 513-552-3418

“CTC” SAFRAN AIRCRAFT ENGINES, France

E-mail: [training.center@safrangroup.com](mailto:training.center@safrangroup.com)

Phone: 33 1 64 14 80 35

# Innovative Global Customer Training Solutions



## Hands-On

- Direct engagement with engine components and systems



## Technical

- ATA level 1-4 training available
- Line Maintenance, Module, Troubleshooting & Inspection procedures offered



## Support

- At the customer field training available
- OEM Subject Matter Experts accessible online or by phone



## Digital

- Computer based and multimedia training available
- Online class registration and catalog



## Global

- Training locations in the United States, France, India and China
- On-site and field training available



## Value

- Digital and streamlined learning for higher retention
- Customized offerings
- Technical training newsletters
- Emphasis on product reliability



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