



INTRODUCING

# SGI ENGINE

SERVICES



# Our Aviation Journey



## Founded 2007,

SGI has grown into one of the largest independent technical advisors to the aviation industry. Since inception, a strong stand-alone engine department was constituted



SGI Aviation is a full-service aviation asset manager, presently managing over **34 aircraft and 90 engines**



HQ Amsterdam with presence in Europe, Middle East, Asia, China and the Americas, SGI engine team currently employs over **30 professionals worldwide**



**15 Years** of first-hand research and extensive inhouse training ensures a continuity of service and real-world advice for engines operators, owners and financiers



Engine Technical Services are performed by a team of **experienced professionals** from all areas of the aviation and aerospace industry. Many have held senior roles with airlines, engine manufacturers, lessors or maintenance organizations



# Engine Team Facts

Engagements in 2024



**102**

Engine re-deliveries

**29**

Engine Shop Visit Mgt

**82**

Engines Physical Inspections

**113**

Engines Records Review

**61**

Engine Pre-Purchase Inspections

**95**

Engine Valuations/ Appraisals



Asset management



**34**

Aircraft

**90**

Engines

**>2,500**

Inspections Days

**90%**

Commercial Engines Covered

**10**

FTE Worldwide

**20+**

Inspectors

**160**

Technical Projects










**15+**

Languages





# Engine Services Customers Examples

Engine Company	Services	Engine type
 <b>Rolls-Royce</b> Rolls-Royce & Partners Finance	Technical Services, engines management	Trent family, PW1100, V2500, GE90, CFM
	Redelivery support, engine storage support	LEAP, CFM56, V2500, Trent 700, CF34, PW1100
	Shop Visits Management	PW1100
	Pre-Purchase inspections, records and physical	CFM56
	Pre-purchase, Redelivery	V2500, CFM56
	Aircraft and Engines asset management, Redeliveries, SV Management	Trent 700, GE90, CF6-80, CF34, PW1500
	Engines Pre-purchase inspections	CFM56, V2500
	Redelivery support, engine storage support	CFM56, LEAP
 <b>CASTLELAKE</b>	Redelivery and delivery support	PW4000, CFM56, V2500, T700

# Engine Services Customers Examples

Engine Company	Services	Engine type
	Shop Visits Management	CFM56
	Engine operations and market survey	LEAP, PW1100
	Engine operations and market survey	LEAP, PW1100
	Shop Visits Management	CFM56
	Fleet engines removal plan, cashflow analysis	V2500, CFM56
	Fleet engines removal plan, SV invoices review	CF6, CFM56
	Shop Visits Management	CFM56, LEAP, RR T700 & T1000
	Maintenance Contract and Support Agreement	GE90, T7000
	Engines Fleet Management	CF6

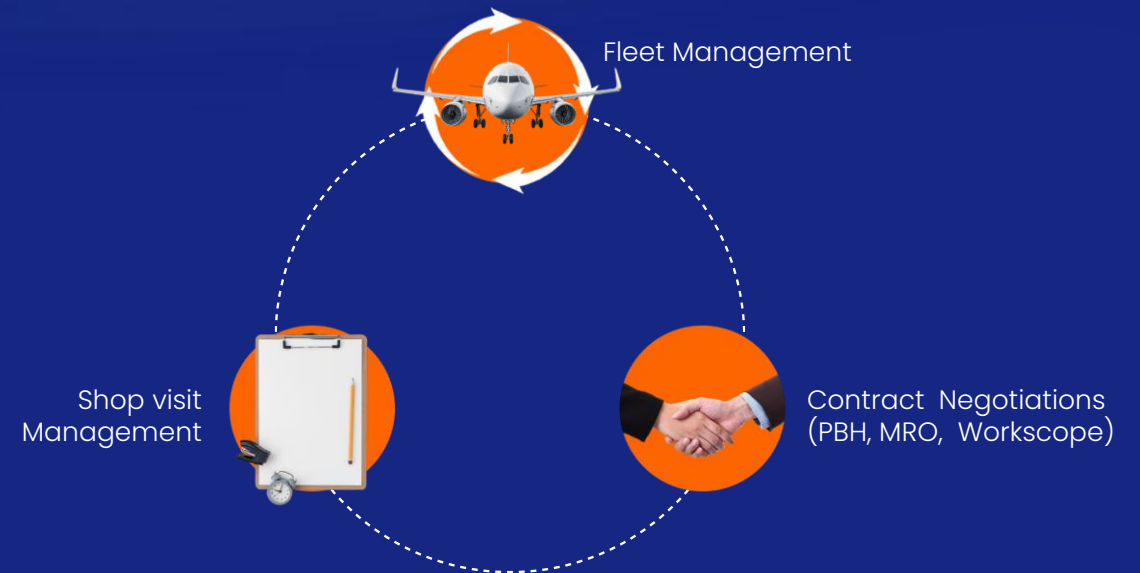
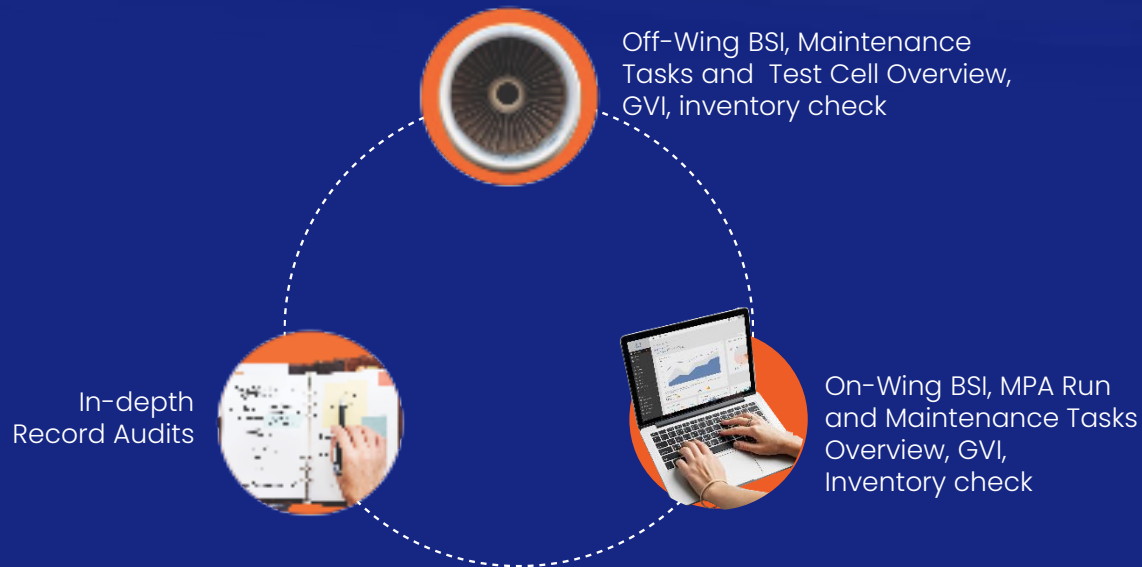
# Technical Services – Engines



Pre-purchase, delivery  
and redelivery inspections



Fleet Optimization



# Engines Inspections



SGI can perform the following inspections on removed or on wing engines

- Pre-purchase inspections
- Annual inspections
- Pre-redelivery inspections
- Redelivery inspections



SGI has developed specific reports for every engine model, inspections normally consist of

- Documentation review, including back to birth in depth analysis, components check, standard review, etc.
- Physical inspection, including GVI, accessories & components check, thrust rating verification

SGI organizes and is capable to witness borescope inspections, engine test cell runs, engine ground runs, engine changes, etc.





# Engine fleet optimization



## Diagnostic – Data Collection

**Duration: approx. 1 month**

Necessary data/information collected by SGI personnel on-site

### Collection of information on current fleet, including

- Current removal plan
- Current spare engines
- Fleet reliability
- Engine shop visit cost- information
- Collection of MRO contracts in place
- Collection of current lease agreements
- Inputs from airline on future plans
- Inputs from airline on operational requirements



## Diagnostic – Results

**Duration: approx. 2 months**

Collected data are analyzed and overall indications and areas to be addressed will be provided to the airline/owner

### Analysis of data collected

- Comparison of airline information with industry standard and SGI experience
- Highlight of areas of improvement
- Indication of which MRO contracts can provide the biggest savings
- Re-discussion of MTX-agreements, if deemed necessary
- Overall indication of spare engines needs



## Implementation

**Duration: continuous process**

SGI and the airline/owner will work together to put in practice the results from the Diagnostic

### Engine fleet management

Optimization of the removal plan through a centralized management of whole fleet same engine type

### Shop visit management

Oversight during engine repair

### MRO contract negotiations

- Re- negotiation and optimization of agreements with the engine MRO Spare parts & LLP procurements before engine shop induction
- Spare engines optimization





# Engine fleet optimization



## Input

### Technical Data

- Engine TSN/CSN
- Modification status
- LLP status
- Performance parameters
- Historical shop visit data

### Financial Data

- Engine lease rates
- Maintenance reserve rate
- Redelivery conditions
- # spare engines

### Operational Data

- Thrust rating
- Mission length
- Operating environment
- Fuel efficiency

## Engine fleet optimization

Baseline data is analyzed and entered into the system

Data is supplemented and adjusted to accurately reflect the current situation

Final results are analyzed and evaluated by the key account manager

## Output

### Financial forecast

- Engine shop visit plan
- Shop visit cost and budget
- MR availability and shortfall

### Operational forecast

- Removal planning and optimization to coincide with maintenance events
- Spare engine forecast (cost, duration etc)

### Miscellaneous:

- Engine operational cost
- MTX evaluation
- Impact of catalogue price escalation
- Easy and up to date forecasting



# Engine Shop Visit Management



## Before

### the shop visit, SGI will

- Perform a detailed analysis of the engine level of repair to match the required airline on wing time
- Assist in sourcing LLPs with the right life remaining (LLP optimization)
- Review the lease to ensure the shop visit is a maintenance reserve reimbursement qualifying event

## During

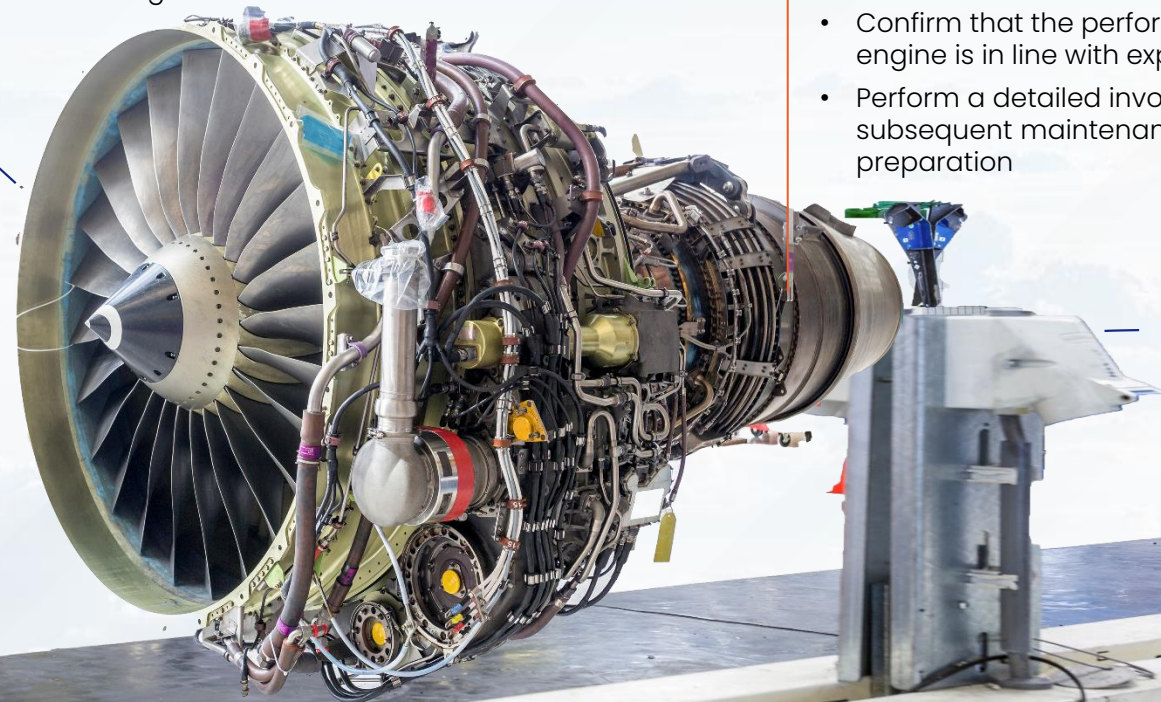
### the shop visit, SGI will

- Attend table inspection to determine the actual technical condition
- Effectively manage the process on a daily basis
- Make informed decisions about the parts that are installed on the engine

## After

### the shop visit, SGI will

- Attend the test cell and borescope inspection
- Confirm that the performance of the engine is in line with expectations
- Perform a detailed invoice review and subsequent maintenance reserves claim preparation





# Maintenance contracts negotiations

## At the initial phase

### Of the review, SGI will

- Assign in-house contract experts to verify existing contracts into detail
- Determine if the current contracts best match the airlines operations (T&M vs NTE vs PBH)
- For power-by-hour agreements, forecast current contractual rates into the future and benchmark whether the shop visit cost is in line with SGI database

## In case of contract

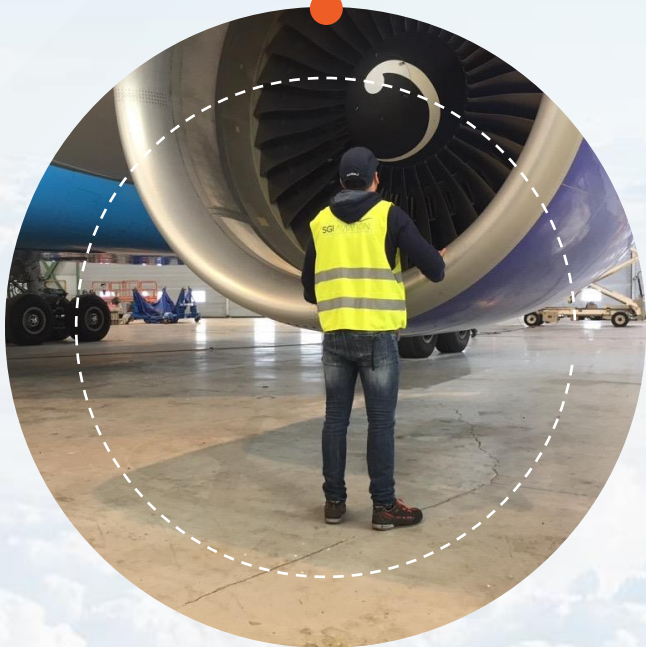
### re-negotiations, SGI will

- Benchmark the various shops for quality; SGI has experience with most repair shops globally
- Contact engine shops for favourable quotes; tested towards SGI database cost figures
- For PBH contracts, SGI will negotiate the different rates together with airline vs the OEMs

## Establish a plan

### For optimization

- Examine the option for power-by-hour agreements








# Contact us :

## Please contact a local representative







### Europe



 Gary Oragano  
 +353 87 2225900  
 [goragano@sgiaviation.com](mailto:goragano@sgiaviation.com)  
 Dublin, Ireland  
 (GMT + 1) Irish Standard Time







### America



 Juan Pablo Rojas  
 +57 3102491218  
 +1 954 529 2000  
 [jprojas@sgiaviation.com](mailto:jprojas@sgiaviation.com)  
 Bogota, Colombia  
 (GMT -5) Colombia Standard






### Singapore



 Francesco Baccarani  
 +65 8870 3376  
 +65 6809 5277  
 [fbaccarani@sgiaviation.com](mailto:fbaccarani@sgiaviation.com)  
 Singapore, Singapore  
 (GMT +8) Singapore Standard






### Asia



 Vinamra Longani  
 +91-9811616110  
 [vlongani@sgiaviation.com](mailto:vlongani@sgiaviation.com)  
 New Delhi, India  
 (GMT + 5.5) Indian Standard

### China



 Martin Sher  
 +86 138 5998 6318  
 [msher@sgiaviation.com](mailto:msher@sgiaviation.com)  
 Xiamen, China  
 (GMT +8) China Standard





# SGI Aviation Engine Team Personnel



A dedicated team of experts

**Danilo Colombo**  
Head of Engines

Danilo joined SGI in 2012 as a Technical Manager in the Technical Management department. He specializes in SVs Management, Deliveries, Redeliveries, Acquisitions, and Engine & APU Maintenance. With extensive experience, he has worked with advanced engines like LEAP, GTF, GENx, and XWB.

**Hans Hochgemuth**  
VP Technical

Hans joined SGI as a Power Plant Engineer, bringing 40 years of aviation experience. He specializes in engine maintenance, Part-M and 145 tasks, and has worked with GE, P&W, RR, and CFM engines across military, general, and commercial aviation.

**Francesco Baccarani**  
Area Manager APAC

Francesco joined SGI in 2008 as a Technical Manager and is now VP Technical, based in the Singapore office. With 19+ years of aviation experience, he specializes in engine management, redeliveries, shop visits, and fleet support. He has expertise in PW4000, CFM56, V2500, CF6-80, CF34-8, and new technology engines like LEAP, GTF, and GENx.

# SGI Aviation Engine Team Personnel



A dedicated team of experts

**Emiliano Ciani**  
VP Technical – USA

Emiliano joined SGI in 2020, bringing 23 years of experience in airline powerplant management. He specializes in airworthiness compliance, scheduled maintenance, engine condition monitoring, and aircraft health management for B737, B767, and B787 fleets.

**Valerio Chiodelli**  
VP Technical

Valerio joined SGI in 2011 and has 18+ years of aviation experience. He specializes in CFM56-5B, CFM56-7B, V2500, PWC125, PW4000, Dart, and GEnx engines, with expertise in borescope inspections, engine troubleshooting, and aircraft redeliveries/deliveries.

**Michael Crivellari**  
VP Technical

Michael joined SGI in 2014 and has 13+ years of aviation experience. He specializes in borescope inspections, engine troubleshooting, and aircraft redeliveries/deliveries, with expertise in CFM56, LEAP, PW1100, V2500, CF34-8C, and Tay engines.

**Omurden Tekin**  
Technical Manager

Omurden joined SGI in 2012 and has 13+ years of aviation experience. He specializes in borescope inspections, engine troubleshooting, redeliveries/deliveries, and pre-purchase inspections, with expertise in CFM56-5B, CFM56-7B, V2500, CF34, GEnx, GE90-115B, and Trent engines.

# SGI Aviation Engine Team Personnel



## A dedicated team of experts

### **Andre' Derron** Technical Manager

Andre' joined SGI in 2011. With 45+ years of experience in engine shop, Andre' spent his life working for SRT. He has worked for various departments of the Engine shop and he has an incomparable experience on CFM56-5B, CFM56-7B and PW4000 engines type. Andre' is a specialist of Borescope inspections, Dirty Condition Inspections, Engine redeliveries / deliveries and pre purchase inspections.

### **Jackson Liu** Technical Manager

Jackson joined SGI in 2012 and has 28+ years of aviation experience. He specializes in borescope inspections, engine redeliveries/deliveries, and pre-purchase inspections, with expertise in CFM56-5B, CFM56-7B, PW4000, and V2500 engines. He is also a licensed borescope inspector.

### **Filippo Bini** Technical Manager

Filippo has 25+ years of aviation experience, working with engine shops and lessors. He specializes in CFM engines, PW4000, CF34, and V2500, with expertise in borescope inspections, engine redeliveries/deliveries, and pre-purchase inspections.

# SGI Aviation Engine Team Personnel



A dedicated team of experts

**Ben Davies**  
Technical Manager

Ben joined SGI in 2013 and has 19+ years of aviation experience. He specializes in borescope inspections, engine redeliveries/deliveries, pre-purchase inspections, and shop visit management, with expertise in Rolls Royce engines, V2500, CFM56-5B, and CFM56-7B.

**Newton Hamamoto**  
Technical Manager

Newton joined SGI in 2022 with 35+ years of commercial aviation experience. He specializes in engineering, fleet management, aircraft transitions, and technical consulting, with expertise in CFM56, CF6-80, PW4000, LEAP, Trent 500, Trent 1000, Trent XWB, and GE90 engines.

**Carlo Curró**  
Technical Manager

Carlo joined SGI in September 2022 and has 18+ years of aviation experience. He specializes in borescope inspections, engine redeliveries/deliveries, troubleshooting, workscooping, and shop visit cost analysis, with expertise in CFM56, CF6-80C, V2500, PW2000, LEAP-1B, Trent 1000, and various APU models.



# SGI Aviation Engine Team Personnel



A dedicated team of experts

**Sofia Fotia**  
Technical Manager

Sofia joined SGI in 2023 and has 5+ years of aviation experience. She specializes in borescope inspections, engine redeliveries/deliveries, pre-purchase inspections, and shop visit management, with expertise in IAE V2500, PW1100, CF6, and CFM56 engines.

**Tayfun Soner Alkac**  
Technical Manager

Tayfun joined SGI in 2023 with 14+ years of commercial aviation experience. He specializes in CFM family engines and Honeywell APU, with expertise in airworthiness, commercial, and operational aspects within the airline environment.