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# **HAECO Group Services**



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## Airframe Maintenance →



# **HAECO Earns Praise from Delta Air Lines**

HAECO commenced a three-year Boeing 767 cabin reconfiguration programme inclusive of heavy checks for Delta Air Lines in September last year, covering Boeing 767-400, 763T and 763L series.

During 2010, HAECO completed 15 aircraft for Delta Air Lines. As a token of appreciation, Delta's supply chain management team made a trip to Hong Kong and hosted a buffet lunch for over 80 of HAECO's frontline technical staff and on-site Delta personnel on 17 February.

Speaking at the lunch, Mr. Jason Adams, General Manager, Supply Chain Management for Delta Air Lines commented, 'HAECO has been a longtime, quality MRO partner of Delta. We selected HAECO for this programme based on its history of solid performance. A programme of this magnitude requires great flexibility and HAECO has exhibited this flexibility and has been a major part of the solution through some initial programme challenges.'

### Airframe Maintenance +



# Taikoo Sichuan Receives CAAC 8C Maintenance Certificate and Redelivers the First Aircraft

On 16 November last year, Taikoo Sichuan Aircraft Engineering Services Co. Ltd. (Taikoo Sichuan) received an '8C Maintenance Certificate' from the Civil Aviation Administration of China (CAAC) Southwest Region - another remarkable achievement, since the company obtained a "4C Maintenance Certificate" in August 2010.

Staff have made great efforts to ensure that all aspects of the operation - including personnel, facilities, regulation, environmental performance and materials - are in strict compliance with the requirements set out by the regulatory authority.



Acquisition of the two Maintenance Certificates has laid an excellent foundation for the development of Taikoo Sichuan, which started operations in mid-2010.

On 10 September 2010, Taikoo Sichuan redelivered its first work package, an Airbus A320 aircraft for Sichuan Airlines, followed by another delivery on 8 December.

The company's two airline customers hold the services provided by Taikoo Sichuan in high regard. To date, the company has completed six aircraft maintenance checks for Sichuan Airlines and one aircraft for Chengdu Airlines.

# Cabin Reconfiguration +



# Completion of Continental Airlines' Boeing 777 BusinessFirst Flat-bed Seat Programme

In September 2009, HAECO was appointed by Continental Airlines to be the exclusive MRO to carry out its BusinessFirst flat-bed seat programme. The new Continental BusinessFirst seats allow passengers to lie completely flat and provide six and a half feet of sleeping space in a fully extended position. Laptop power, headsets, USB plugs and iPod connectivity are conveniently tucked into the seat. HAECO completed flat-bed seat installation on the 20 aircraft in Continental's Boeing 777 fleet in December last year, receiving high praise from the airline.



# TAECO Expands Engineering Design Capabilities

Taikoo (Xiamen) Aircraft Engineering Co. Ltd. (TAECO) has expanded its capability in engineering design, having attained Designated Modification Design Organisation Representative (DMDOR) approval from the CAAC in December last year. TAECO is now able to design and carry out tailor-made modifications and issue certificates of cabin reconfiguration on B-registered aircraft. TAECO also possesses Design Organisation Approval, granted by the Hong Kong Civil Aviation Department, to issue Supplemental Type Certificates covering full cabin completion.

# Cabin Reconfiguration +





# TAECO Becomes First Airbus-approved Corporate Jet Outfitter in Asia Pacific

Airbus has been expanding the range of completion centres available to its corporate jet customers. In March, TAECO became the first Airbus-approved cabin outfitter in the Asia Pacific region. Outfitting the cabins of aircraft such as the Airbus Corporate Jet (ACJ) and A320 Prestige is an important and exciting new business opportunity for TAECO, which has already built a cabin mock-up to showcase its capability in the field.

Becoming Airbus first completion centre in the Asia Pacific region is a recognition of TAECO's expertise and experience in the aircraft engineering field. TAECO was awarded the role of Airbus-approved completion centre after going through a complete audit of the company and its capabilities. The approval allows Airbus to recommend TAECO to its customers with confidence.

TAECO is the latest addition to a network of eight Airbus-approved cabin outfitters around the world.

# Cathay Pacific and HAECO Join Hands and Maintain a Defect-free Cabin

In early 2010, Cathay Pacific Airways introduced a 'Defect-free Cabin Programme' for its passenger aircraft. The programme works towards a goal that all aircraft departing Hong Kong should be free of defects that might impact on passenger experience.

A vital component of this defect-free drive is the Cabin Management Centre (CMC) at HAECO. The CMC team comprises a team of HAECO staff and representatives from Cathay Pacific, as well as its suppliers of seats and Inflight Entertainment (IFE). Its aim is to centralise the management of cabin defects, cabin standards and maintenance schedules. This collaborative approach has paid off in considerable improvement to the quality of the Cathay Pacific cabin.

# Line Maintenance →





# **HAECO Handles A380**

HAECO has recently extended its Line Maintenance capability to Airbus A380 aircraft. HAECO handled Emirates' A380 maiden flight to Hong Kong on 1 October 2010; this service will increase to double daily in early 2011.

# Three HAECO Customers Deploy Airbus A330-200F on Their Services

HAECO recently welcomed a new customer, Etihad Crystal Cargo, which commenced freighter services to Hong Kong using Airbus A330-200F aircraft in October last year. Another two existing customers, Hong Kong Airlines and Turkish Cargo, have expanded their Hong Kong operations with Airbus A330-200F.

#### Line Maintenance →





#### SHAECO - Company Capabilities

- Line Maintenance Services
- Specialised Services at Singapore Changi International Airport
  - Boroscope Engine Inspections
  - V2500 Engine Compressor Washing
  - Compass Swinging
  - Line Maintenance Planning
  - RAT Testing
  - Marshalling

# SHAECO - Record Year in 2010

Singapore HAECO Pte. Ltd. (SHAECO) was formed to fulfill the maintenance agreement between HAECO and Jett8 Airlines Cargo, which is to provide Fleet Technical Management (FTM) and Inventory Technical Management (ITM) services to the Singapore-based freighter airline. SHAECO focuses its capabilities on Line Maintenance services so as to strengthen HAECO's presence in the region.

2010 was a record year for SHAECO, with two rapidly-expanding low-cost Southeast Asian carriers sealing Line Maintenance agreements with the company. Jetstar Asia/Value Air and AirAsia became SHAECO customers during the year, with Jetstar also awarding a Store & Logistics agreement to HAECO/SHAECO. This is the first time a Singapore-based airline has appointed different MROs to service their line maintenance and heavy maintenance requirements.

SHAECO is currently handling the entire AirAsia fleet transiting Singapore, which covers 30 flights daily, and providing full Line Maintenance services for Jetstar Asia in Singapore.

Not only does SHAECO focus on customers in Singapore and Malaysia, but the company also extends its reach to other parts of the Asia Pacific region, including Indonesia and Thailand. SHAECO signed service contracts with Air Asia Indonesia, Air Asia Thailand and Batavia Air in 2010.

## Fleet Technical Maintenance +

# Comprehensive FTM Services

In addition to providing full fleet technical management services to airline customers, the HAECO FTM team also supports aircraft owners, lessors, banks and airlines during lease returns, aircraft inspections and records inspections.

The team recently supported an Airbus aircraft inspection in the Philippines, monitored hangar checks on Boeing aircraft in Malaysia, and managed record and technical reviews for lease returns in the Middle East. The HAECO FTM team provides onsite support, progress monitoring and reporting as well as following up with the compilation of detailed technical reports on aircraft status.



Material Management +



# HAECO Material Management Signs Regional AOG Logistics Support Agreement

The HAECO Material Management team, in collaboration with dedicated freight forwarders, has been providing a one-stop, 24/7 regional Asia logistics service to customers including Cathay Pacific Airways and Atlas Air. HAECO, benefitting from Hong Kong's position as a logistics hub, with great regional flight coverage and efficient customs formalities, is able to deliver critical AOG spares swiftly to airline customers' outports and therefore minimise aircraft ground time. HAECO signed regional AOG logistics support agreements with Lufthansa Cargo in September last year, covering 13 line stations in the carrier's Asia Pacific networks.

# Component Overhaul +



# **HAECO Staff Receive Training from Goodrich**

HAECO staff have received training from Goodrich on the Service Bulletin Issue 17 of the Full Authority Fuel Control (FAFC). FAFC is installed on Rolls-Royce RB211-524G/H engines powering Boeing 747 and 767 aircraft. The Service Bulletin is designed to upgrade software and maintain unit reliability. HAECO started to provide this service in mid-January.

# Component Overhaul +

# TALSCO Anticipates Business Growth in 2011

Taikoo (Xiamen) Landing Gear Services Co. Ltd. (TALSCO) is a landing gear facility with authorised capabilities for repair/overhaul of Boeing 747, 767, 757, 737NG and 777 installation level landing gear, as well as related special processes, such as Nondestructive Inspection, Grinding, Shot Peening and Plating.

In March last year, TALSCO completed the first overhaul of a Boeing 757 and 737NG shipset. During 2010, TALSCO completed overhaul work on 70 sets of landing gear. The company's professional and high quality service is attracting customers from all over the world. TALSCO forecasts that it will overhaul more than 90 sets of landing gear in 2011.



# Component Overhaul +





# Taikoo Spirit Signs Five-Year Agreement with Hainan Airlines for B737NG CFM56-7 Thrust Reverser Repair and Overhaul

Taikoo Spirit AeroSystems (Jinjiang) Composite Co. Ltd. (Taikoo Spirit) is a joint venture between HAECO, TAECO, Spirit Aerosystems and other minority shareholders. It performs repair and overhaul services with a key focus on engine nacelles and components for Boeing 737NG and 777 aircraft. The state-of-the-art 17,000 sqm composite repair facility includes PAA Clean Line, Bond Room, two Paint Booths, and two Autoclaves. Taikoo Spirit started its operations by providing overhaul services to Cathay Pacific Airways Boeing 777 Trent800 Thrust Reversers.

In December last year, Taikoo Spirit signed a five-year agreement with Hainan Airlines for the repair/overhaul of Boeing 737NG CFM56-7 Thrust Reversers and other components. The company is the first MRO in China to conduct Boeing 737NG CFM56-7 Thrust Reverser SB1079 modification.

In addition to the existing capability on Boeing 737NG CFM56-7 and Boeing 777 Trent800 Thrust Reverser overhaul, Taikoo Spirit has obtained regulatory approvals for maintenance of GE90 Thrust Reversers and repair of Boeing 757/737 Flight Controls.

To date, Taikoo Spirit has repaired/overhauled five Trent800 Thrust Reversers for Cathay Pacific Airways, achieving exceptional quality and a record TAT.

# Engine Overhaul +



# HAESL On-Wing Total Support Extends Capabilities

Hong Kong Aero Engine Services Limited's (HAESL) Onwing Total Support (HOTS) team achieved an important milestone in August last year. The company attained approval from Hong Kong Civil Aviation Department to extend its boroscope inspection and blending capabilities to four more engine types: GE90 (powering the Boeing 777 series), RB211-535E4 (powering the Boeing 757 series), CFM56 (powering the Boeing 737 series) and V2500 (powering the Airbus A320 series).

The HOTS team has been growing and building stronger capabilities in recent years, aimed at providing comprehensive on-wing support solutions to airline customers in the Asia Pacific region.



# HAESL Receives Occupational Safety and Health Award

On 21 September last year, HAESL received a bronze award for its Occupational Safety and Health (OSH) Report at the ninth Hong Kong Occupational Safety & Health Award Forum. The presentation ceremony was held at the Hong Kong Convention and Exhibition Centre and was officiated by Mr. Matthew Cheung, JP, Secretary for Labour and Welfare of the Hong Kong SAR Government.

This award acknowledges organisations that demonstrated excellence in their OSH performance. It also recognises companies that published timely, accurate, informative and well-presented annual reports for the benefit of all their key stakeholders.

HAESL was awarded for its 2009 Sustainable Development report, entitled "Best in the World, Best for the World", which clearly illustrates HAESL's commitment to ensuring that staff are able to enjoy a healthy and safe working environment while the company achieves sustainable development of its business.

# Engine Overhaul +



# TEXL Expansion in Progress

As an authorised GE90 Service Provider, a GE90 Centre of Excellence and the sole holder of a GE90 GE Branded Service Agreement in Asia, Taikoo Engine Services (Xiamen) Co. Ltd. (TEXL) receives access to General Electric's (GE) inventory and technical resources, which ensures effective technology transfer.

In July last year, TEXL celebrated the completion of its first GE90-115B Quick Turn (QT) engine. Repair services included modifications and repairs to the OGV Leaf Seal, Turbine Centre Frame and High Pressure Turbine (HPT) module, followed by a full performance test in the TEXL Test Cell. The cell is rated at 150,000 pounds of thrust.

Up to December last year, TEXL had received 11 QT engines from operators including Cathay Pacific Airways, Air India, EVA Air, Jet Airways, Thai Airways and Turkish Airlines.

Construction work on a new extension adjacent to the existing 3,500 sqm facility is close to completion. TEXL Phase 2 will include a two-storey building with an approximate floor area of 19,500 sqm, capable of undertaking both module strip and build and component repair. Together with new machines, plant and equipment, the expanded facility will allow TEXL to provide full engine overhaul services. A grand opening of the Phase 2 facility is scheduled for June 2011

TEXL's capability development will be implemented in phases. The next phase will be the full strip to pieces part of the HPT module. It is expected to be available in April 2011.



# **Interview with Cathay Pacific**

Christopher Gibbs Engineering Director, Cathay Pacific Airways Limited



Cathay Pacific now operates a 159-strong fleet. Cathay Pacific Engineering is a key part of the infrastructure supporting the airline's growth. Can you share with us the airline's future growth plans and talk about recent developments such as cabin modifications and the flat bed seat project?



Christopher Gibbs



What attributes do you consider crucial to an MRO?



Christopher Gibbs



Cathay Pacific and HAECO have been business partners since 1950. What are your views on HAECO's services?



Christopher Gibbs



# **Interview with Cathay Pacific**

Christopher Gibbs Engineering Director, Cathay Pacific Airways Limited







- What challenges is Cathay Pacific facing? How do you see HAECO's role in supporting Cathay Pacific to overcome these challenges?
- A Christopher Gibbs
- What is your view on the market outlook for the aviation industry in the coming few years?
- A Christopher Gibbs
- Do you foresee any opportunities for strategic co-operation between Cathay Pacific and HAECO?
- A Christopher Gibbs







# **HAECO Celebrates 60th Anniversary**

On 17 November 2010, HAECO held a ceremony at its Hangar Two to celebrate its historic 60th year of operation in Hong Kong.



Mr. Donald Tsang, Chief Executive of the Hong Kong SAR
Government and Ms. Eva Cheng, Secretary for Transport
and Housing, were Guests of Honour at the ceremony. The event was officiated
by Mr. Christopher Pratt and Mr. Augustus Tang, Chairman and Chief Executive
Officer of the company respectively.

Mr. Tsang highlighted HAECO's contribution to the Hong Kong aviation industry in his speech and remarked that HAECO is a truly home-grown international brand.

Speaking at the event, Mr. Christopher Pratt, Chairman of HAECO, said, 'I am immensely proud that, at 60, HAECO is a global brand - known and respected throughout the aviation industry. In a complex and highly competitive field, we have built a reputation for world-class quality, reliability and service. And what makes me even prouder is that HAECO is entirely home-grown: conceived and developed in Hong Kong and owing its success to the talent and dedication of Hong Kong people.'

To celebrate the event, the company hosted a dinner reception, attended by over 600 guests, including airline customers, business partners, government officials and staff.





# VIP Guests Visit HAECO

Mr. Ye Hao, Deputy Director-General of the Department of Hong Kong, Macao and Taiwan Affairs, Ministry of Foreign Affairs of the People's Republic of China paid a visit to HAECO on 2 March. HAECO's CEO, Mr. Augustus Tang, and COO, Mr. Kenny Tang, received Mr. Ye's delegation and introduced the guests to HAECO's services and facilities.



# HAECO Supports ORBIS Flying Eye Hospital 'Clear Cloudy Vision Tour'

On 7 October last year, HAECO welcomed the ORBIS Flying Eye Hospital, which launched its 'Clear Cloudy Vision Tour' using HAECO as its base in Hong Kong. For more than 10 years, HAECO has been supporting ORBIS by offering free maintenance services and assistance with open days and media events during the aircraft's stay in Hong Kong. In October last year, ORBIS organised a guided tour of the Flying Eye Hospital, photo exhibitions and a game booth for donors and visitors, with the aim of promoting public awareness of cataracts, which are a major cause of preventable blindness. The Flying Hospital stayed at HAECO until 17 October and hundreds of visitors got a chance to visit this unique hospital. As one of ORBIS's sponsors, HAECO has pledged its support to help ORBIS save eyesight worldwide. >











# **Pedal Kart Grand Prix 2010**

On 20 and 21 November last year, HAECO participated in the Hong Kong 24-hour Pedal Kart Grand Prix 2010 at Victoria Park. This is an annual charity event organised by the Association of Round Tables in Hong Kong Charitable Foundation. The event has been running since 1986 and raises funds for various charities in Hong Kong, Mainland China and the rest of Asia.

More than 30 teams were entered by a number of sizable corporations including Cathay Pacific Airways, China Light & Power, MTRC and HAECO. All teams are required to pedal non-stop for 24 hours and the team that achieves the greatest number of laps or the longest distance wins. The 70-staff HAECO team pedalled over 1,700 km (2,534 laps), winning the Formula 88 Category.

The HAECO team also organised a company-wide charity fundraising sale in support of the Pedal Kart Grand Prix event. Thanks to HAECO's airline customers, the company received donations of aircraft models, T-shirts, mugs and other promotional items for the charity sale, raising a total of HK\$50,000.



# **HAECO Group Capabilities**

AIRCRAFT TYPE	EASA		FAA		HKCAD / CAAC	
	BASE MAINTENANCE	LINE MAINTENANCE	BASE MAINTENANCE	LINE MAINTENANCE	BASE MAINTENANCE	LINE MAINTENANCE
A300 / A310		<b>† †</b>	<b>†</b>	<b>†</b>		<b>† †</b>
A319 / A320 / A321	<b>+</b> +	<b>+</b> +	<b>+ +</b>	<b>+ +</b>	<b>† † †</b>	<b>† † †</b>
A330	<b>+</b> +	<b>† †</b>	<b>†</b>	<b>†</b>	<b>+</b> +	<b>† †</b>
A340	<b>+</b> +	<b>† †</b>	<b>†</b>	<b>†</b>	<b>+</b> +	<b>† †</b>
B737	<b>+</b> +	<u>†</u> †	<u>+ + +</u>	<b>+++</b>	<del>† †</del>	<b>+ + +</b>
B737NG	+	<u>+</u>	<b>† †</b>	<b>+ +</b>	<u>†</u>	<u> </u>
B747	<b>+ +</b>	<b>† †</b>	<b>† †</b>	<b>† †</b>	<b>+</b> +	<b>+ +</b>
B757	<b>+ +</b>	<b>† †</b>	<b>±</b>	<b>†</b>	<b>+</b> +	<b>+ +</b>
B767	<b>+ +</b>	<b>† †</b>	<b>† †</b>	<b>† †</b>	<b>+</b> +	<b>+ +</b>
B777	<b>+</b>	<b>† †</b>	<b>†</b>	<b>† †</b>	<b>+</b> +	<b>+ +</b>
MD11	<b>+</b>	<b>† †</b>	<b>+</b>	<b>† †</b>		<b>+</b>
CL-600						<b>+</b>
CRJ-200 / 700					<b>+</b>	+
ERJ170						<u>+</u>

Capabilities also include Line Maintenance services for A380



The Group also has approvals on aircraft, engines and components maintenance from the other regulatory authorities across Asia, Africa, the Pacific, the Caribbean and Australia, which include Australia CASA, Bahrain CAA, Bangladesh CAAB, Bermuda DCA, Canada TC, Indonesia DGCA, Israel CAAI, Japan JCAB, Jordan CARC, Kenya CAA, Korea CASA, Macao SAR AACM, Malaysia DCA, Mongolia CAA, Nepal CAA, Pakistan CAA, Papua New Guinea CAA, People's Republic of China CAAC, Qatar CAA, Republic of China CCAA, Singapore CAAS, South Africa SACAA, Sri Lanka CAA, The Fiji Islands CAAFI, The Philippines CAAP, Thailand DCA, Vietnam CAAV, United Arab Emirates GCAA.



## ADDITIONAL CAPABILITIES

#### Airbus MRO Network

#### Cabin Reconfiguration / Modification

#### Winglet Modification

- B757 / 767

## **Freighter Conversion**

- B737-300 / 400
- B747-200 / 300 / 400
- B757-200

#### **Engine Overhaul**

- Rolls-Royce Engines (RB211 & Trent)
- GE90 Engines

## Landing Gear Overhaul

- B737 / 747 / 757 / 767 / 777

## Workshop Composite Repair

- B737NG CFM56-7 T/R
- B777 Trent 800 T/R
- GE90 T/R
- B737 / 757 Flight Control

# Aircraft Parts Production & Manufacturing

## Approved under:

- HKAR-1 A2 Manufacturing Approval
- HKAR-21 POA
- Boeing BQMS
- BVQI (AS9100)
- Nadcap

## **Design & Engineering**

#### Approved under:

- HKAR-1 E2 & E3 Design Organisation Approval
- HKAR-21 Design Organisation Approval
- SAR-21 Design Organisation Approval

# Maintenance Training & Examination

## Approved under:

- HKAR-147
- CCAR-147
- EASA Part-147
- SAR-147
- Airbus MRO Maintenance Training Network
- Hong Kong Civil Aviation Department Authorised Aircraft Maintenance Licence Examination Centre

## Aircraft Painting

#### Non Destructive Testing (NDT)

## **Hydrostatic Test Facility**

## Approved by:

- U.S.A. - DOT

#### Calibration Laboratory (CALMET)

- HOKLAS accredited laboratory; Mutual Recognition Arrangement through APLAC on traceability of standards
- CNAS accredited laboratory

