

HAECO Group





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# **HAECO Group Services**



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# HAECO Accomplishes 200th Hangar Input for Continental/ United Airlines



On 26 July, HAECO hosted a maintenance review meeting for the management team from United Airlines Airframe Vendor Management, led by Managing Director, Mr. Roger Brown.

During the meeting, Mr. Brown presented HAECO with a framed letter signed by Mr. Jeff Smisek, United Airlines' CEO, in recognition of HAECO's hard work and dedication to the on-time completion of the Boeing 777 fleet flat bed seat installation programme. In return, HAECO presented United Airlines with an engraved crystal memento commemorating HAECO's 200th hangar input for Continental/United Airlines since 2002.

The Continental/United Airlines-HAECO partnership began with the Continental Micronesia Boeing 747 heavy check project in 1996, and since then, HAECO has provided maintenance services for Continental/United Airlines' Boeing fleet. Over the years, HAECO has accomplished a number of challenging programmes for Continental/United Airlines, including the Boeing 777 overhead crew rest area programme, Audio Video On Demand (AVOD) modification and flat bed seat installation project.



# **HAECO Completes 2C Check on United Airlines' Boeing 737NG**

In June, HAECO completed a 2C Check on a United Airlines' Guam-based Continental Micronesia Boeing 737NG aircraft. This was the first of a series of Boeing 737NG 2C Checks that HAECO will perform for the airline in 2011. Apart from the routine 2C Check work, HAECO performed a terminating repair to rectify a vertical stabiliser shim migration. This involved removal and installation of the vertical stabiliser, a major repair job that has very high skill requirements. HAECO also repainted the aircraft in its new United livery.

Finnair Continues
with HAECO Group
as its A330/A340
and MD-11
Maintenance
Service Provider



On 7 February 2002, Finnair made its inaugural flight to Hong Kong, beginning a regular scheduled service. In the same year, HAECO began providing line maintenance services for the airline's MD-11 passenger aircraft.

The business relationship was further strengthened in 2007, when HAECO started providing line maintenance services for Finnair's MD-11F cargo fleet and in 2008, Finnair signed a three-year aircraft maintenance agreement with HAECO for its A330/A340 fleet. In 2009, line maintenance services were extended to Finnair's A340-300 and A330-300 passenger aircraft. In 2010, HAECO performed C checks on two of the airline's Boeing 757 aircraft on an ad-hoc basis. In 2011, HAECO will conduct C Checks on A330 /A340 aircraft for Finnair.

In August this year, Finnair awarded a C Check on one of its MD-11 aircraft to Taikoo (Xiamen) Aircraft Engineering Co. Ltd. (TAECO), marking an important milestone in the HAECO Group/Finnair business relationship, which continues to thrive.





# **TAECO Opens Sixth Hangar in Xiamen**

On 18 June, Taikoo (Xiamen) Aircraft Engineering Co. Ltd. (TAECO) opened its sixth maintenance hangar at Xiamen Gaoqi International Airport. The new 45,790 square-metre hangar is fully equipped to accommodate two wide-body aircraft, enabling a 20% capacity expansion. TAECO's US\$73.5 million investment in the new hangar facilities underscores the company's confidence in the burgeoning demand for aircraft engineering services worldwide.

Mr. Xu Mo, Secretary-general of Xiamen Municipal Government and Mr. Augustus Tang, Chairman of TAECO, were the guests of honour at the opening ceremony. Mr. Tang said: "As one of the major subsidiaries of the HAECO Group, TAECO has developed a strong reputation in the aircraft engineering industry over the past 15 years. The fast-growing economy in Mainland China will generate significant air traffic growth, leading to increasing demand for high quality and efficient airframe engineering services. The opening of TAECO's sixth hangar is a testimony to our commitment to providing world-class aircraft engineering services to our customers around the globe."

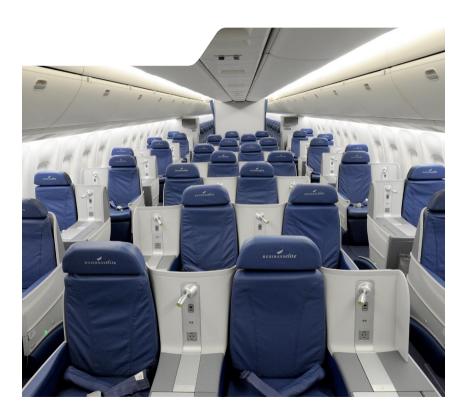
TAECO also unveiled its new Executive and Private Jet Completion Centre at the new facility, highlighting its long-term vision to serve the growing executive and corporate jet cabin outfitting market in Mainland China and the rest of Asia. The Airbus approved Executive and Private Jet Completion Centre is housed in one of the hangar's bays and is isolated from the rest of facility, to provide the utmost privacy and security for customers' aircraft. To facilitate cabin outfitting work, the sixth hangar is equipped with a wide variety of executive and corporate jet support shops and a customer showroom.



# **TAECO Redelivers Air France Boeing 777 Aircraft**

On 21 August, TAECO completed airframe maintenance checks and redelivered its first Boeing 777 aircraft for Air France. The business relationship between TAECO and Air France began in 2007, when the airline input its first Boeing 747-400 to TAECO for freighter conversion. The relationship has since gone from strength to strength, with TAECO carrying out airframe maintenance for Air France on three separate aircraft types this year, including Boeing 747-400, and A340, in addition to the Boeing 777.

# Cabin Reconfiguration +



# HAECO Completes Delta Boeing 767300T Prototype Flat Bed Modification

In July, HAECO completed the first 767-300T flat bed modification prototype aircraft for Delta Air Lines. The project was extremely challenging, but with concerted effort from both the Delta Air Lines and HAECO teams, the aircraft successfully achieved STC and departed for Atlanta, marking another milestone in the Flat Bed Modification Programme.

# Cabin Reconfiguration +





# **TAECO Launches Design Engineering Office**

On 27 July, TAECO opened a Design Engineering Office at its new Executive and Private Jet Completion Centre. The office is situated in the newly-opened Hangar 6 and houses the design team that has been working with Airbus over the last three years to obtain approval for the centre. The approval makes TAECO the first Airbus-approved completion centre for executive and private jets in the Asia Pacific region. The design team has been trained in the use of autocad, 3D max and Catia and offers a full suite of design services, from conceptual drawing and industrial design to detailed engineering design.



# Cabin Reconfiguration +



# TAECO Completes First Cathay Pacific Boeing 777300ER FB2 Modification

On 2 September, TAECO successfully completed modification work to install the new Business Class product on a Boeing 777-300ER FB2 aircraft for Cathay Pacific Airways.

Thanks to some thorough planning and scheduling to ensure smooth execution, it took less than four weeks to put a whole new look on aircraft B-KPB's cabin. B-KPB marked the start of a substantial cabin modification programme: by 2013, TAECO will have finished retrofitting 17 Boeing 777-300ERs and 13 A330-300s for Cathay Pacific. The programme marks a new phase in TAECO's cabin upgrade capability.

# Component Services +



# TALSCO Supports Yangtze River Express in an AOG Incident

On 1 May, Yangtze River Express discovered that an inner cylinder on the left wing landing gear of its Boeing 744 aircraft had a bad leakage problem. The airline ferried the aircraft from Shanghai to Taikoo (Xiamen) Landing Gear Services Co. Ltd. (TALSCO) in Xiamen, for the inner cylinder exchange. After jacking up the aircraft in the hangar, TALSCO's technical staff removed the shock strut, replacing the defective inner cylinder with a newly overhauled one in just six hours before carrying out a retraction/extension test. The aircraft was back in service within 48 hours. During that long weekend in May, TALSCO and TAECO responded to the AOG incident in a timely and efficient manner, working non-stop to accomplish the task and ensure customer satisfaction.

# Component Services +

# Taikoo Spirit Achieves Faster TAT on Thrust Reverser Overhaul

Taikoo Spirit AeroSystems (Jinjiang) Composite Co. Ltd. (Taikoo Spirit) recently reviewed its overhaul procedures on Hainan Airlines' CFM56-7 thrust reversers, with the aim of improving efficiency and increasing overall customer satisfaction. As of July 2011, Taikoo Spirit has overhauled 12 thrust reversers with another four units in progress for the airline. By 2013, Taikoo Spirit is expecting to have finished 70+ consecutive thrust reverser overhauls for Hainan Airlines.

The recent review has seen the TAT on thrust reversers improve from the initial 70 days to 32 days, then 22 days. Taikoo Spirit closely monitored the process time required for each procedure – from receiving the thrust reverser, disassembling, cleaning, carrying out NDT, and sanding it, to performing autoclave repairs and modifications. Time spent in between the processes was also observed and recorded.

After the exercise, Taikoo Spirit saw obvious improvements in the areas of skills and material control. For example, sanding time for the inner wall was shortened from five to two days. In addition, improvements in workmanship resulted in faster TAT. All the improvements were made with absolutely no sacrifice in quality – the highest standards are maintained at all times, with all procedures carried out in accordance with the OEM standard.

As a result, Taikoo Spirit achieved a remarkable reduction to 32 days' TAT on the airline's second thrust reverser input in April and 22 days on the third input in June.



# Engine Overhaul +





# **HAESL Opens Phase V Centre of Excellence Facility**

On 15 June, Hong Kong Aero Engine Services Ltd. (HAESL) opened its Phase V Component Repair Centre of Excellence (CoE) building, enabling the company to deliver high-quality and on-time repair services to its global customers. Established in 1997, HAESL has progressively expanded its production capacity and capability.

HAESL's Phase V facility has increased its total floor space by 13,500 square metres to 51,200 square metres and HAESL is now equipped with one of the most comprehensive in-house component repair capabilities in the Roll-Royce Gas Turbine Services network.

The ceremony began with opening remarks from HAECO's CEO, Mr. Augustus Tang, HAESL's Chairman and President of Rolls-Royce GTS, Mr. Tony Wood and guest of honour, HAECO's Chairman, Mr. Christopher Pratt. Their speeches were followed by a pig-cutting ceremony, lion dance and a guided tour of the new facility.

# HAESL On-Wing Total Support

Launched in 2007, the HAESL On-Wing Total Support (HOTS) service have been growing rapidly and adding significant value to customers. The HOTS team provides 24/7 field services for global customers on the Roll-Royce RB211 and Trent family of engines, as well as non-Roll-Royce engine types such as the GE90, CFM56 and V2500. In 2010, the HOTS team responded to over 120 events globally, primarily in the Asia-Pacific region.

To further develop the HOTS services in a more structured and strategic way, HAESL appointed Mr. Francis Kwei as its On Wing Care Manager in July. The key role of this new position is to provide support, coordination and promotion for engine overhaul, customer business and the burgeoning HOTS customer base.





# **HAESL Completes 2,500th Engine Test**

In May, HAESL completed its 2,500th engine test on a Cargolux 524G/H-T engine, serial number 13791. Fifteen years ago, in 1997, HAESL tested its very first engine – a Trent 800, serial number 51020, for Cathay Pacific Airways. Over the years, HAESL has tested numerous engine types, from the very early 524 engines – the 22B fitted to TriStar aircraft – to the latest marks of the 524-B4, C2, D4, G/H and G/H-T engine. In addition, the company has tested a variety of Trent engines, including the 700 and 800 and the final version the Trent 500.

Moving forward, HAESL will continue to grow its capacity, gradually taking on more engines each year. The volume of engine sales is growing exponentially and this phenomenon is having a positive impact on HAESL: it is estimated that the company will have tested another 2,500 engines by the end of 2020.

In addition to its current projects, HAESL is developing capability on the Trent XWB, serving the needs of customers operating this new engine type.

# Engine Overhaul +





# **TEXL Expands GE90 Engine Overhaul Facility**

On 30 June, Taikoo Engine Services (Xiamen) Company Limited (TEXL) celebrated the opening of its expanded GE90 engine overhaul facility. The Phase 2 facility includes a two-storey building with a floor area of 17,500 square metres. Together with new plant and equipment, the expansion allows TEXL to provide full GE90-110/115B engine overhaul capability. The expansion is sited adjacent to the existing 3,500 square-metre facility, which includes a state-of-the-art, 150,000-pound thrust engine test cell.

The ceremony was officiated by Standing Committee Member and Deputy Mayor of Xiamen Municipal Government, Mr. Ding Guo Yan, HAECO's Chairman, Mr. Christopher Pratt and GE Aviation's General Manager, GE90 Engine product line, Mr. Bill Millhaem.

Mr. Pratt said: "As the only holder of a GE Branded Service Agreement in Asia, TEXL is a very important part of the HAECO Group's overall strategy of widening its service scope to meet customer demand. The projected growth of the global aviation industry and, in particular, of air traffic around the Asia Pacific region, will lead to an increasing need for efficient, quality airframe and aero-engine overhaul and repair services. I believe we are extremely well positioned to take advantage of this upsurge."

Most recently, TEXL received Part 145 certification from the European Aviation Safety Agency (EASA), US Federal Aviation Administration (FAA) and Civil Aviation Administration of China (CAAC) that allows the facility to perform complete overhaul of the GE90-110B and 115B engine models.



# **Interview with Roger Brown**

Managing Director, Airframe Vendor Management, United Airlines



Continental Airlines and United Airlines reached a merger agreement last year, creating the world's leading airline, with a comprehensive global network serving 370 destinations around the world. What are the airline's future growth plans?



Roger Brown



The new airline stands for a great blend of experience and expertise. What are the challenges in your management position in the newly merged company?



Roger Brown



What attributes do you consider crucial for an MRO?



Roger Brown



# **Interview with Roger Brown**

Managing Director, Airframe Vendor Management, United Airlines



- HAECO has been the MRO partner of subsidiary Continental Airlines since 1996. Over the years, we accomplished nearly 300 inputs for the airline. What is your opinion of HAECO's services?
- A Roger Brown
- Continental Airlines has been investing heavily in developing premium cabins. In 2009, HAECO completed the Boeing 777 crew rest modification programme for the airline. What is your view on HAECO's capabilities and performance?
- A Roger Brown
- From a technical point of view, what are the advantages for a customer that entrusts its aircraft to HAECO? Any examples?
- A Roger Brown
- What is your view on the aviation market's outlook in the coming years?
- A Roger Brown







# First HAECO Customer Service Awards

HAECO launched a Customer Service Awards programme in April this year in order to further enhance its customer-oriented culture and to recognise outstanding staff performance. This programme is open to all Hong Kong-based HAECO staff below manager grade in all departments and business units. All HAECO Hong Kong customers and staff are eligible to make a nomination. The first HAECO "Customer Service Awards" Award Presentation Ceremony was held on 12 July. In this inaugural event, seven individuals or teams qualified to be award recipients. The ceremony was attended by HAECO customers and staff members and HAECO's CEO, Mr. Augustus Tang, presented the prizes.



# **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>
A319 / A320 / A321	<b>+</b> +	<b>† †</b>	<b>+</b> +	<b>+</b> +	<b>† † †</b>	<b>† † †</b>
A330	<b>† †</b>	<b>† †</b>	<b>+</b>	<u></u>	<b>+ +</b>	<b>† †</b>
A340	<b>+ +</b>	<b>† †</b>	+	<b>+</b>	<b>+ +</b>	<b>† †</b>
B737	<b>† †</b>	<u>†</u>	<u> </u>	<u>+ + +</u>	<b>+ +</b>	<u>+++</u>
B737NG	+	<u>+</u>	<b>+ +</b>	<b>† †</b>	<b>† †</b>	<b>+++</b>
B747	<b>+</b> +	<b>† †</b>	<b>+ +</b>	<b>† †</b>	<b>+ +</b>	<b>+ +</b>
B757	<b>+ +</b>	<b>† †</b>	<b>+</b>	<u>+</u>	<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>
MD11	<b>†</b>	<b>† †</b>	+	<b>† †</b>		<b>+</b>
CL-600						<u>+</u>
CRJ-200 / 700					+	+
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

### Wheels & Brakes

### Repair/Overhaul

### Tyre Retreating Services

# 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



