

CASL Spirits

China Aircraft Services Ltd.

SPIRITS: Safety First · Positive Communication · Innovation · Resources Management ·

Improvement on Continuous Basis · Teamwork · Satisfaction of Customers

A Joint Venture of



Newsletter Issue 2 June 2012



We provide Integrated MRO solutions.

Committed to Quality
and on-time delivery

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Introduction



Dear readers,

CASL has achieved remarkable growth in its base maintenance business this year.

For the last 12 months, CASL has

performed eleven C-checks. In the coming months, CASL expects base business to continue growing, with more new customers choosing the services from CASL.

We are glad to see that our latest customer satisfaction survey revealed that the overall

satisfaction level of our base customers score is eight out of ten.

We achieved good-to-excellent standing in planning, technical competence, value for money, and on-time delivery.

CASL's technical capability is constantly improving. Recent accomplishments included a landing gear change for an A320, flap track change for a B737NG, and an avionic modification for a B737NG.

We are delighted to be again awarded the "Caring Company" for 10 consecutive years by the Hong Kong Council of Social Services, in recognizing our efforts and contributions in caring about the employees, the community, and the

environment.

In fact, over these years, including CASL, there are only two companies at the Hong Kong International Airport that have received the "Caring Company" award for 10 straight years.

CASL will continue to grow by creating service differentiation in the MRO market and satisfying our customer needs.

We look forward to continue servicing your fleet and grow our partnership with you.

Sincerely,

Angus Cheung

Chief Executive Officer



CASL employs more than 1000 staff with extensive experiences and a wide range of capabilities. We are fully committed to providing the highest quality of services to our customers by focusing on technical development, customer care and continuous improvement.

China Aircraft Services Limited (CASL) is a joint venture among China National Aviation Corporation (Group) Limited (40%), Hutchison Whampoa (China) Limited (20%), United Airlines (20%) and China Airlines (20%).

CASL was founded in 1995 to provide aircraft line maintenance, cabin cleaning, and ground support equipment services at Hong Kong International Airport.

Air China, China Eastern Airlines, China Southern Airlines and Xiamen Airlines have representations in the company via CNACG's shareholding ownership of CASL.

Apart from operating in Hong Kong, CASL and China Eastern Airlines established a joint venture company - Shanghai Eastern Aircraft Maintenance Limited (SEAM) providing aircraft line maintenance and ground support equipment services at Shanghai Pudong International Airport since 2003.

CASL opened its aircraft maintenance hangar at Hong Kong International Airport in May 2009, CASL is capable of providing higher level of aircraft maintenance services to worldwide airline customers in both aircraft line maintenance and heavy maintenance

Our Customers:

- Air Busan
- Air China
- Air China Cargo
- Air France
- Air Hong Kong
- Air Macau
- Asiana Airlines
- AviaStar
- British Airways
- Cargolux Airlines
- China Airlines
- China Cargo Airlines
- China Eastern Airlines
- China Postal Airlines
- China Southern Airlines
- Delta Airlines
- Donghai Airlines
- Dragonair
- Eastar Jet
- Egypt Air
- Federal Express
- Far East Air Transport
- Fly Guam
- Grandstar Cargo
- Hainan Airlines
- Hong Kong Airlines
- Hong Kong BAC
- Hong Kong Express
- Japan Airlines
- Jeju Air
- Jet Aviation
- Jin Air
- JSC Siberia Airlines
- JuneYao Airlines
- Kartika Airlines
- KLM Royal Dutch Airlines
- K-Mile Air
- Lufthansa German Airlines
- Lufthansa Technik AG
- Mandala Airlines
- Mandarin Airlines
- Mega Maldives Airlines
- MIAT Mongolian Airlines
- Nordic Cargo
- Orient Thai Airlines
- Shandong Airlines
- Shanghai Airlines
- Shenzhen Airlines
- Sichuan Airlines
- Tianjin Airlines
- Transasia Airlines
- Transaero Airlines
- United Airlines
- Virgin Atlantic Airways
- Xiamen Airlines
- Yangtze River Express



CASL Spirits is a quarterly newsletter for its customers, partners, and employees.

<http://www.casl.com.hk>

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China Airlines 737-800 AV14 Check



Corrosion Inspection

China Airlines is one of our shareholders. CASL has performed maintenance checks for many aircraft of its 737NG fleet with an excellent track record in

on-time re-delivery.

There was no exception on the recent AV14 check.

The check involved a much wider and more complicated check scope than the ones before. The aircraft was also older.

The scope included structural and corrosion inspection, EWIS (Electrical Wiring Interconnection System) inspection, cable change, and a sophisticated avionic modification.

The corrosion inspection required removal of all seats, galley, toilet in the cabin and opening up of all floor panels for inspection.

A special resource arrangement was made to shorten the overall ground time.

Since the avionic modification and the cable change could not be done in parallel, to meet the 12-day redelivery deadline, we arranged additional avionic mechanics from our Line Maintenance department to support this base check.

After days and nights of hardwork, teamwork, and the strong support of China Airlines in tooling and parts supply, we were able to overcome all obstacles and once again completed the check on time.

Air Macau A320 13C-check and Landing Gear change



Landing Gear change for Air Macau A320

That was CASL's first time to perform a Landing Gear (L/G) change.

The A320 family has a number of different configurations – A319, A320, A321 and -100, -200.

Although in the same family, there are differences in tooling requirements for the L/G change for each configuration. Nevertheless, with detailed preparation, everything went as planned and

HKA 737-800 1C-check



HK Airlines (HKA) and HK Express (HKE) are sister companies. In recent years, they have continued to expand rapidly in fleet size and route network.

This time, CASL supported the 1C check and logo change of a 737-800 aircraft leased from HKA to HKE.

CASL's cooperation with HKE started three years ago, when CASL sent our engineers to Seattle to assist in the inspection and receipt of three new 737-800 airplanes. We witnessed the initial establishment and growth of this airline. HKE is like an old friend to CASL. We are grateful to have the opportunity to service and grow a stronger relationship with HKA and HKE.

Jeju Air 737-800 2C-check



Jeju Air is a rapidly expanding LCC in Korea. CASL

we completed the check on time.

The scope of the Air Macau 13C check included a general inspection as well as Cabin refurbishment, 80VU avionic rack reinforcement, Borescope inspection, Vertical Stabilizer, Horizontal Stabilizer, and Lower Skin tap tests, inboard flap trunnion sliding panels modification, nose and main L/Gs replacement.

The CASL NDT (Non Destructive Testing) team performed the HFEC (High Frequency Eddy Current) and LFEC (Low Frequency Eddy Current) inspections for the Pylon and Wheel-well Door Hinge.

The 80VU avionic rack structural reinforcement is something that CASL has done many times, our sheet metal team handled it with ease.



Transporting components from old L/G to serviceable L/G

Although it was CASL's first time, the L/G change was completed with no surprises. The old set of L/G was removed and sent back to the designated overhaul shop. The team removed the specific components from the old L/G and transported them over to the serviceable L/G. The L/G retraction test was successful.

Challenges came with the inboard flap trunnion sliding panels modification, there were different opinions within the working team on the removal and installation procedures, resulting in long discussions and removal of many components. CASL learnt a good lesson for this task.

The 13C check lasted from May 9 to May 22. The aircraft was delivered on time and the customer was satisfied with CASL's work.



Serviceable L/G Installed

is glad to be a close partner of Jeju Air, and providing its flexible and economical maintenance service to Jeju Air.

In this 2C check, we accomplished a flap track modification, cabin refurbishment, and corrosion inspection.

It is worth to mention that for the borescope inspection task, we used a 3D Videoscope Phase Measurement System, a tooling recently added by CASL. Not only this enabled us a clearer view of the inside of the engine, it also helped us to make more accurate 3D measurements, improving the efficiency of the inspection.

In the second half of 2012, CASL will perform C-checks for two other aircraft of Jeju Air's fleet, including a landing gear change in July.



CASL performing floor mat change inside cabin

Non Destructive Testing in CASL

Non Destructive Testing (NDT) is an essential service offered by CASL within our scope of safety and reliability in aircraft maintenance operations. Within CASL, NDT is heavily regulated by the aviation authorities and as such all CASL NDT personnel are qualified to PCN (Personnel Certification in Non-Destructive Testing). The NDT methods that are utilized in CASL are Liquid Penetrant Testing (PT), Magnetic Particle Testing (MT), Eddy Current Testing (ET) and Ultrasonic Testing (UT). All the inspection methods complement each other as each method will have their unique advantages for a given inspection. Amongst inspection criteria that could determine the preferred method would be preparation work prior to inspection, material to be inspected, coating on material, access to the inspection area and type of defect to be found.

NDT on aircraft in CASL will generally be performed on scheduled and unscheduled maintenance. For scheduled maintenance, NDT could range from inspections of fastener holes, areas of the fuselage, seat tracking and airframes. All NDT is completed on the aircraft. Skilled personnel will then select the correct NDT method to use in conjunction with the correct equipment to perform the inspection without the need to remove components. To dismantle aircraft components down to piece part level and then inspect each component would be a time consuming process. NDT inspections on the aircraft will not have a detrimental effect on the aircraft turnaround time.

Unscheduled maintenance is generally trouble shooting and defect rectification. NDT is necessary when damage has been caused to the aircraft by lightning strikes or heavy contact from luggage or catering loaders. NDT will also be carried out on accessories of equipment or machinery, which could include the shear pins on towing trucks.

Along with other maintenance checks, NDT is a fundamental aspect of aircraft safety. Without NDT, the cost of maintaining and flying aircraft would increase dramatically.

On the right is an image of an Eddy Current inspection.

C-checks performed

Aircraft Type	No. of C-check performed
Airbus A320	5
Boeing B737NG	8

On-Time Re-delivery : 100%

Figures from Hangar opening to June 2012



NDT (Eddy Current) inspection

Aircraft hit by Lightning Strike

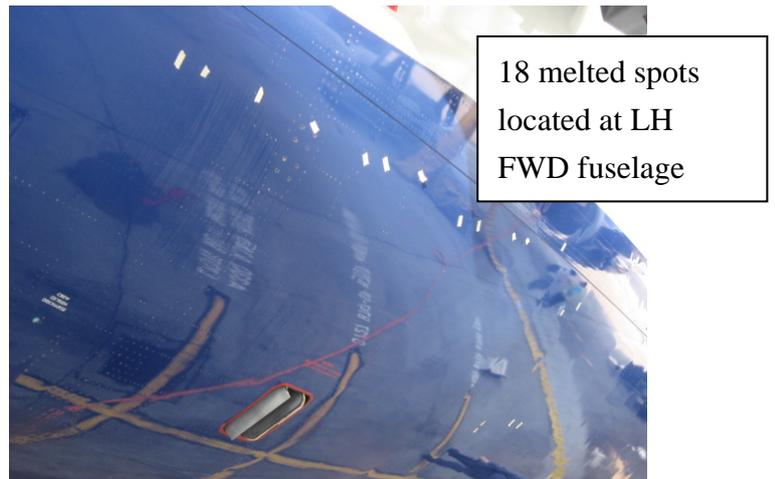


A B777 aircraft was struck by lightning while climbing after leaving London's Heathrow airport. The aircraft arrived in Hong Kong on the morning of Apr 26. No passengers were injured in the lightning strike.

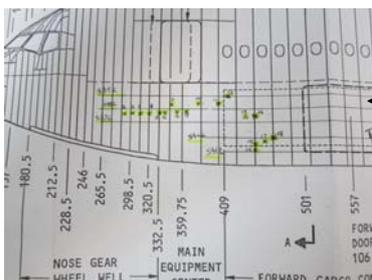
On arrival, the captain reported lightning strikes after departure in the technical log book and an Air Safety report was filed. CASL immediately arranged two engineers with a team of mechanics to perform a detailed inspection on the aircraft in accordance to the maintenance manual procedure.

We finished our initial inspection in 2.5 hours. We located 19 small brown and black melted spots all the way across the left hand forward fuselage. We marked all the damaged spots on the fuselage and took photos for the airline's further assessment.

We reported the inspection result to Airline Maintenance control and asked their experts to give us the repair instruction. We also called our Base Maintenance sheet metal team and NDT teams to give help on the repair process.



A close-up view of the melted spots



Damage was marked on the Station Number diagram

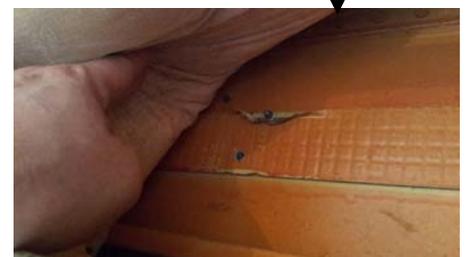
We blended 18 melted spots, performed NDT and confirmed the fuselage skin thickness was still within the Structural Repair Manual (SRM) limit. Three melted spots exceeded the SRM limit, and we carried out blind rivets repair.

Everyone was working very hard to get the plane airborne again. The plane was finally released into service at noon. The flight departed at 1:50 P.M. with approximately a 4 hour delay. The delay was still within the crew's curfew time. The airline manager appreciated CASL's effort in this emergency support.



Damaged area, drilled

Damaged area repaired by blind rivets



無論客戶的需求在多短時間內通知，我們都會盡力服務。
Why we are here. To give flexible service.



CASL completed
HK Express 737-800 1C Check.



Lufthansa Technik and CASL work together to provide on-site engine support in Hong Kong



AST® Engine Services Conference in May 2012. Representatives from Lufthansa Technik AST® Engine Services, CASL, Air Macau, Hainan Airlines, Hong Kong Airlines, Juneyao Airlines, Shenzhen Airlines, and Spring Airlines.

When an aircraft is grounded due to a technical problem, for the operator this is not only inconvenient, but it also means a serious loss of income.

CASL is substantially strengthening its service portfolio. The new cooperation with Lufthansa Technik (AST® Engines) will enable customers to profit from the enhanced portfolio made available locally in Hong Kong by the cooperation.

In accordance with the Letter of Intent with Lufthansa Technik, CASL will provide Hangar, Tools, and Office space to Lufthansa Technik at the Hong Kong International Airport, and Lufthansa Technik will provide experienced mechanics for engine services.

Lufthansa Technik's Engine Services product division has been offering its AST® Engines product at Hong Kong since 2007.

Two highly experienced engine technicians form the core of the team.

Permanently stationed at Hong Kong airport (HKG), they provide services such as borescope examinations, blending jobs, minor repairs and modification work. They are highly successful, performing 50 to 60 missions every year in the Asia region.

The cooperation will enable CASL's

customers to have access to Lufthansa Technik AST® Engine service at CASL's facility in Hong Kong.

A customer conference was held on May 11 2012. Participants include Air Macau, Hainan Airlines, Hong Kong Airlines, Juneyao Airlines, Shenzhen Airlines and Spring Airlines.

The first customer input was successfully handled in May 21-25, 2012.



CASL & Lufthansa Technik Signing Ceremony



AST® Engine Services Conference 2012



Inspection and Blending Demonstration



Service In action – 1st customer input

Employment reach out Program to the Hearing Impaired



Hong Kong Society for the Deaf (HKSD)



Sign Language Training Course on May 17, 2012

We are happy to cooperate with the Hong Kong Society for the Deaf (HKSD) for organizing an employment reach out program. The program is aimed to increase manpower for the growing business of CASL and at the same time, to encourage and help the hearing impaired persons to adapt and contribute to the society.

On April 13 2012, CASL held a recruitment seminar to introduce our company background and job opportunities to the members of HKSD. The feedback was very positive. We received 22 hearing impaired applicants for our interviews on the same day.

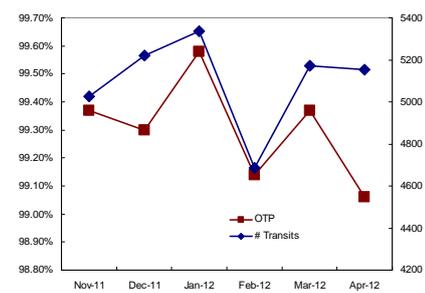
To enable our existing cabin service staff to communicate with the new joining staff, we invited representatives of HKSD to provide a sign language course for our staff to learn how to communicate with the hearing impaired persons. We have also started preparing the suitable pre-job training and equipment for the hearing impaired persons in order to put this meaningful project into practice as soon as possible.

Maintenance Approvals – OTAR Part 145



CASL has obtained a new maintenance approval from the CAA Cayman Islands on May 11 2012. The scope and rating of this approval is in-line with the EASA Part 145 approval that is held by CASL. With full support from the operator, the first maintenance check for a B737-700 BBJ was completed on May 24 as per schedule. The result is encouraging and this new approval allows more private and business operators use of the maintenance services from CASL.

On-Time Performance



CASL line maintenance maintained an OTP of >99.1% in the last 6 months.



CASL 147-approved Training School

Facility Expanded

CASL has recently expanded our ramp facility. We have established a workshop in at 4Y533 of PTB (Passenger Terminal Building) to support our Line Maintenance activities. The renovation was done by our Facility Management team

In addition, to support a greener airport environment, CASL has started to replace the traditional T8 lamp tubes installed in line operation by the more energy saving LED lamps.



More energy saving LED lamps installed

Addition of A320 T1 & T2 Training

Since December last year, CASL had been working closely with Hong Kong CAD to expand its training capability.

We are pleased that CASL has successfully been granted both the T1 and T2 ratings of the A320 family into CASL's HKAR-147 approved type training courses by the Hong Kong CAD in March 2012.

CASL's HKAR-147 Maintenance School was set up in 2010. It's initial offerings

were the B737NG series capabilities. Throughout the years, CASL have been dedicated in providing quality and prestigious training to its staff in supporting its maintenance and engineering operations.

By collaborating with external training organizations and tertiary education bodies, CASL has successfully organized various technical and industry-related training courses, not only to CASL staff,

but also to partners and customers' organizations.

In future, CASL will strive to continuously enhance its staff's knowledge, know-how and skills through provision of training and development opportunities, because we believe human capability is our biggest asset.

中飛團隊. 實力證明. Proving the capability. CASL Team.

CASL completed Air Macau A320
13C Check and Landing Gear Change.



10 Consecutive Years Caring Company Award



On 3rd May 2012, our CEO Dr. Angus Cheung represented CASL to receive the 10 consecutive years Caring Company Award. The Caring Company scheme was first launched in 2002 by The Hong Kong Council of Social Service aimed at cultivating greater social responsibility among the business community. CASL is honoured to have his nominator, Hong Kong Sheng Kung Hui Tung Chung Integrated Services, in supporting and building together a cohesive community in the previous 10 years. The caring spirit of CASL to the Community, Employees and Environment will definitely carry into the next decade.

CASL participates in The World's Greenest Airport Pledging Ceremony



Airport Authority Hong Kong (AAHK) and 40 aviation business partners pledged at a ceremony held on 8 May 2012 to make the Hong Kong International Airport (HKIA) the world's greenest airport by reducing 25% of its carbon intensity by 2015.

China Aircraft Services Limited (CASL) as one of the participants, promises to make the most efforts in constructing the Hong Kong International Airport into one of the world's most environmentally airports.

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24 x 7 Operation Support



Aircraft Maintenance Capability

Aircraft Type	Line	Base
B737-300/400/500	✈	
B737-600/700/800/900	✈	✈
B747-200/300	✈	
B747-400	✈	
B757	✈	
B767-200/300	✈	
B777-200/300	✈	
A300-600	✈	
A319/A320/A321	✈	✈
A330	✈	
A340-200/300	✈	
A340-500/600	✈	
MD11/MD82/MD90	✈	
ERJ145/ERJ190	✈	

Support Shop Capability

Sheet Metal	NDT	Battery Overhaul
Heat Treatment	Part Painting	Cabin Interior
Composite Repair	Electrical/Electronic Testing	

Approvals

145 AI/101/798	CAA-RS-015
JMM057	ROK 2010-AMO F01
FAR 145 VZFY534Y	HKAR147 AT/146/0410
EASA.145.0037	120-CAY-AMO-2012

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