MITSUBISHI HEAVY INDUSTRIES, LTD.

COMMERCIAL AVIATION SYSTEMS

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Shimonoseki Shipyard & Machinery Works 16-1 Higashi Yamatomachi 2-chome Shimonoseki City, Yamaguchi, 750-8505, Japan Phone: 81-83-267-8335

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MHI RJ Aviation INC Tucson 1555 E. Aero Park Blvd., Tucson, AZ,85756 USA

IJSC Intercontinental Jet Service Corporation 3322 N. 74th E. Ave Hangar27 Tulsa, OK 74115 USA

COMMERCIAL AVIATION SYSTEMS







MOVE THE WORLD FORW>RD MITSUBISHI

MITSUBISHI HEAVY INDUSTRIES GROUP



GLOBAL AVIATION BUSINESS

MHI Commercial Aviation Systems supplies major components of commercial airplanes, including the wings and fuselages to the world's leading aircraft manufacturers - Boeing, Bombardier, and Airbus. As an international joint development and manufacturing partner, we are proud to offer world-class scope of operations and technological capabilities. In the aftermarket business, MHIRJ, one of the largest maintenance, repair, and overhaul (MRO) service provider for regional jets in the United States, serves as the backbone of airline fleet operations. Going forward, MHI Commercial Aviation Systems will continue to improve its productivity through integrated manufacturing, from component manufacturing to structural assembly, as well as refine reliable technologies and expand our aftermarket business, to deliver comfortable air travel to people around the world.













MHIRJ MHI RJ Aviation ULC HQ

Aftermarket Business Aviation Engineering Center Aero Advisory Services



Aftermarket Business

BRIDGEPORT U.S.A.



MHIRJ MHI RJ Aviation INC Bridgeport

Aftermarket Business





Shimonoseki Shipyard & **Machinery Works**

787 Stringers

SHIMONØSEK

HANOI Vietnam

MHIVA MHI AEROSPACE VIETNAM CO., LTD.

737 Inboard Flaps

777 Passenger Entry Doors and Bulk Cargo Door

A321 Overwing Doors

TULSA U.S.A.

IJSC Intercontinental Jet Service Corporation

MU-2 MRO





MHICA MHI CANADA AEROSPACE, INC.

Global 5000/6000 Series, Challenger 300/3500 Wings, Center Fuselage and Center Wing

MHI RJ Aviation ULC Toronto office

Aftermarket Business Asset Management



Head Office



Nagoya Aerospace Systems Works

787 Composite Wings



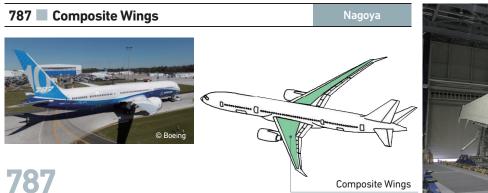


Hiroshima Machinery Works

- 767 Aft Fuselage and Cargo Doors
- 777 Aft Fuselage and Tail Fuselage
- 777X Aft Fuselage and Tail Fuselage

Major Products

Boeing Commercial Airplanes



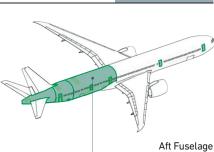


Bombardier Business Jets



777/777X Aft Fuselage, Tail Fuselage, Passenger Entry Doors and Bulk Cargo Door



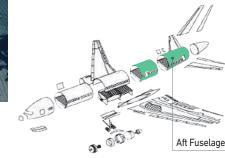


Hiroshima/ MHIVA Vietnan











737 Inboard Flaps

767

737



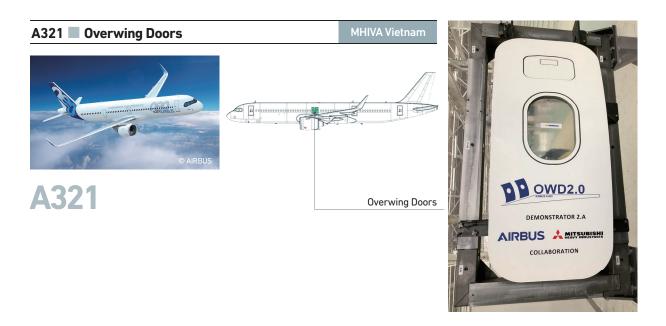




Challenger 300/3500(CL) Wings MHIC

Challenger 300/3500 (CL)

Airbus Commercial Airplanes



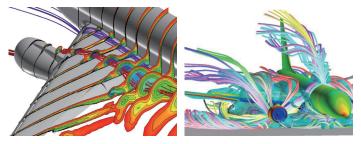


Engineering Capabilities

Aftermarket Business

Design of Whole Aircraft

Various analytical techniques such as CFD and FEM



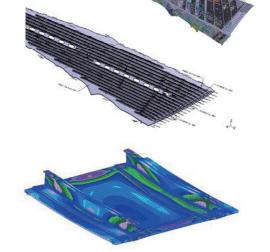
Type Certification Support

Providing know-how as an OEM manufacturer



MHIRJ

Supports ZeroAvia's hydrogen electric power train certification



Design of Large Composite Structures

Design of large composite structures and

development simulation

Manufacturing Capabilities

Equipment for manufacturing large carbon fiber composite parts

Autoclave



Heating and pressurizing device to cure resin of carbon fiber composite material

Key	Maximum Temperature: 220°C
Performance	Pressure: 0.7 MPa (104psi)
Effective Dimension	Ф7,000 mm × 36,000 mm

Automatic Assembly Robot Line

MPAL: Multi Panel Assembly Line

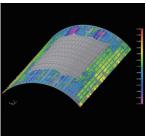


Automatic drilling and riveting device

Key Performance	Upper Unit 5 Axis / Lower Unit 6 Axis Spindle speed: 18,000 rpm Clamp force: 0.7
Effective Dimension	8,000mm × 5,010mm



Dimension inspection result



Service Centers

Material Solutions

Aircraft maintenance, repair and overhaul (MRO)







New Approaches

Unmanned Aerial Vehicle (UAV)

Middle Size: Payload up to 200kg



Small Size: Range up to 2 hours flight (optional battery type available)



Service Solutions

In-service support and technical services



Robotics

Automation of confined space work



