



*Entirely focused on Your mission*

*May 2021 Newsletter*

ASI-Group May 2021

# NEWSLETTER

- Presentation of ASI-Group's activities
- ASI opens a new location:  
Paris-Vatry International Airport
- ASI acquires the assets of Business and  
Commuter Aircraft, an MRO and STC house  
specialized in the Beechcraft King Air series
- Reims-Cessna Caravan II Modernization  
Program

# ASI-Group

## Group Presentation

- Specialized in the design, development, manufacturing and certification of mission and surveillance systems
- Avionics suite upgrade and retrofits (from very light to large aircraft and rotorcraft)
- Cabin modifications

# ASI-Group

## (Aero System Integrated Innovation)

- Established in January 2010,
- ASI-INNOVATION Group (Holding) oversees two companies:
  - ASI-INNOVATION,
  - ASI-AVIATION  
(continuation of REIMS AVIATION F406 manufacturing)





# ASI-Group

## (Aero System Integrated Innovation)

- Continued Airworthiness (TC Holder of the Cessna F406)
- Development, certification and installation of STC's (structural, interior, avionics, mission systems)
- Over 500 major modifications and STC's certified



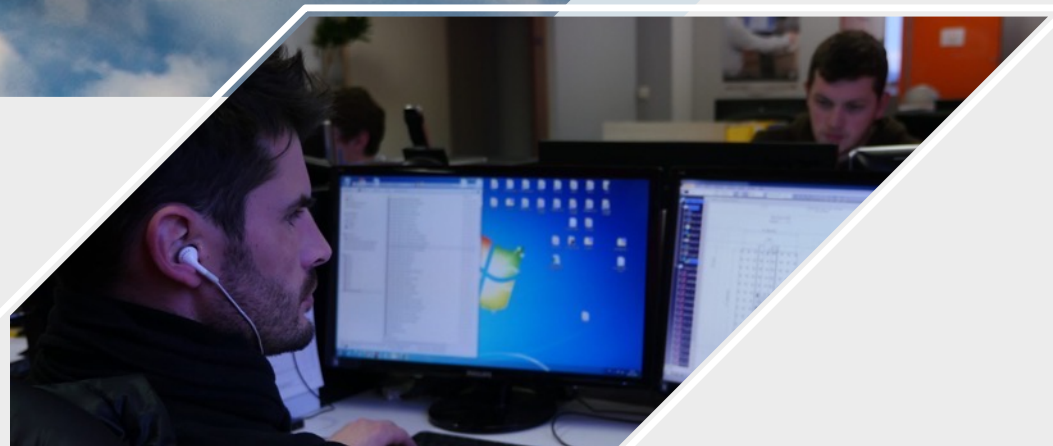


- Aviation Engineering
- Design Office  
(electrical systems, avionics, mechanical, structure)
- Mission & Surveillance Systems  
Integration & Certification
- Program Management
- Repair Design & Certification  
(minor / major)
- Airworthiness Management
- Documentation (OPS, Technical Maintenance,...)
- Flight Testing
- Aircraft Acquisition sales and support
- Systems Acquisition sales and support





- Design Office
- Engineering
- Certification
- Aircraft modifications
- Airworthiness management
- Aircraft maintenance & repairs (light & heavy)
- Parts manufacturing
- Cessna F406 Type Certificate Holder
- F406 operational support & airworthiness management
- Aircraft avionics retrofit & upgrade





# ASI perpetuates a long tradition

1933 to 2020, a long success story



1933  
Max Holste  
Aircraft



1965  
Reims Aviation  
subsidiary of  
Cessna Aircraft



1983  
F406  
Design,  
certification and  
production



2010  
ASI is founded



2014  
ASI acquires  
Reims Aviation  
and founds ASI-  
Aviation



# ASI is strategically located

Close to Paris, Germany, Austria, Switzerland, Belgium, Luxembourg, the UK and the Netherlands

## Headquartered in Reims,

40 minutes train ride from Paris

- Based on the Reims-Prunay (LFQA) airport
- Lighted 1100 m runway (3300 ft)
- RNP precision approaches

## Secondary location at Paris-Vatry International airport

Third largest airport in the Paris area

- Accessible 7/24/365
- 4000 m runway (12650 ft)
- RNP/ILS precision approaches
- Accessible to the largest categories of aircraft

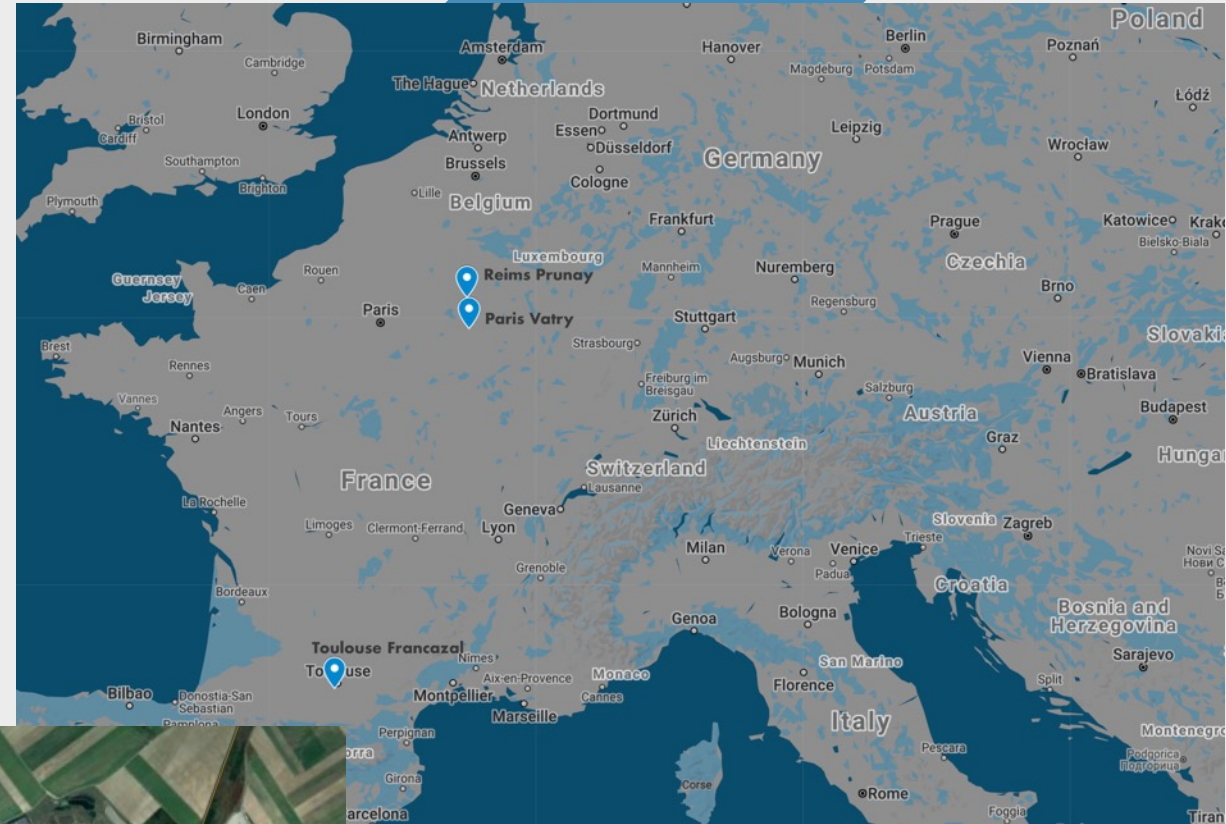
## Liaison and Technical Support office: Toulouse Franczal

Close to Airbus, ATR and the largest aeronautical campus in Europe



Reims Prunay

Paris Vatry



# A steady growth over time

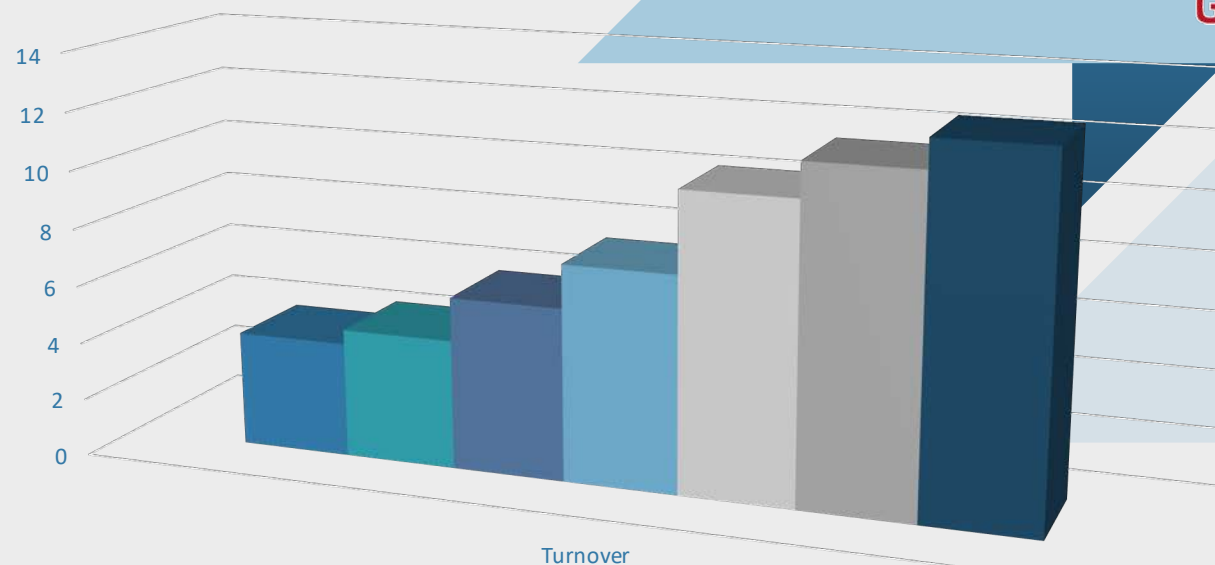
Customer base and sales increase regularly over time



# ASI

GROUP

Global Turnover M€



■ 2014 ■ 2015 ■ 2016 ■ 2017 ■ 2018 ■ 2019 ■ 2020

# Certifications held

ASI holds EASA certifications allowing to work on all airframe types

## Design Organization



ASI-Innovation PART-21-J EASA 21J-482



ASI-Aviation PART-21-J EASA 21J-064

## Production Organization



ASI-Aviation PART-21G EASA FR-21G-076

## Maintenance Organization



ASI-Aviation PART-145 EASA FR-145-536



ASI-Aviation DGA FRA 145



**EASA**  
European Aviation Safety Agency

This allows ASI to design, modify, certify, install structural modifications, electrical, hydraulic, and avionic systems on aircraft of the following categories: CS-23, CS-25, CS-27, and CS-29

*ASI also holds "FRA" certifications (military and state-owned airframes).*









*ASI-Group holds certification to work on: LSA/VLA, CS-23 small aircraft, CS-25 Large aircraft, Very Light rotorcraft, CS-27 light rotorcraft, CS29 large rotorcraft*



# Certifications held

ASI holds EASA certifications allowing to work on all airframe types

These certifications allow ASI-Group to work in the following fields:

-  Structural modifications
-  Engine maintenance and exchange
-  Interior modifications
-  Electrical and hydraulic systems
-  Avionics
-  Vibration analysis and remedial
-  Aerodynamical problem solving  
(flutter, external pods, hard-point mounted systems)
-  Flight testing  
(internal department, including licensed test pilots)



**EASA**  
European Aviation Safety Agency

# Certifications held

ASI holds EASA certifications allowing to work on all airframe types

Although primarily certified by EASA, ASI works on a regular basis with National Aviation Authorities and Certification Agencies all around the world.



**Australian Government**  
**Civil Aviation Safety Authority**



**KOCA** KOREA OFFICE OF CIVIL AVIATION



# Governments and military

ASI Group modifies, refurbishes and equips aircraft for specific missions wherever your aircraft is based

ASI has demonstrated its capacity to work on large, state operated or working aircraft, and rotorcraft, including STC certification when needed



ASI-Group has received specific state or military certification in different countries



These activities are managed under special confidentiality clauses and cannot be discussed.





# Close relationship with the main avionics and mission systems manufacturers

ASI operates a specialty avionic shop, capable of all avionic related work



# A solid team

We have heavily invested in our team. Team management is key to growth

## ASI has the necessary staff under permanent contract:

Example : Staff Avionics licenses status as of July 15th 2020 Reims Prunay location

Individual Identifier	Type of licence						Release Certificate	Remark
	A	B1.1	B2	C	P66			
KDS			✓	✓			✓	
PKS	✓	✓		✓			✓	
EBT	✓	✓					✓	
PLT	✓	✓		✓			✓	
TCU			✓	✓				
LTE	✓			✓			✓	
GLT	✓	✓		✓			✓	
AMR			✓					
FET		✓						
FLE		✓						
MHK		✓						
TMR		✓						Under tutoring
<b>Total</b>	<b>5</b>	<b>7</b>	<b>3</b>	<b>6</b>	<b>0</b>		<b>6</b>	



# ASI-Group offers

A safe path to your project completion

- **Special knowledge and skills, proven track record in complex project management**
- **Solid partnerships based on:**
  - Mutual trust
  - Open relationship
  - Profitable projects delivered on time and on budget
- **Delivers to customers based on:**
  - Proven experience of the ASI team
  - Unique track record on mission systems and aircraft modifications
  - Realistic project analysis before committing to budgets and timeline





# ASI-Group announces a new location

Paris-Vatry International Airport



# ASI-Group announces a new location

Paris-Vatry International Airport

ASI-Group's growth has led the company to invest into a new location on the third largest international airport in the Paris area. Open 24/7/365, Paris-Vatry offers a 4000 m. (12800 ft) Runway, ILS and RNP all weather approaches. ASI secured a 2500 m<sup>2</sup> (250 000 sq/ft), fully equipped hangar

Main advantages of Paris Vatry:

- International airport, accepting Heavy and Super Heavy traffic
- Customs and immigration services on site 24/7
- ILS cat I, II et III approaches and GNSS (RNP) precision approaches
- Direct access to the European highway system



# ASI-Group announces a new location

## Paris-Vatry International Airport

### Airport Management perspective:

*"Paris-Vatry is located on a European highway hub, allowing direct access to all parts of Europe.*

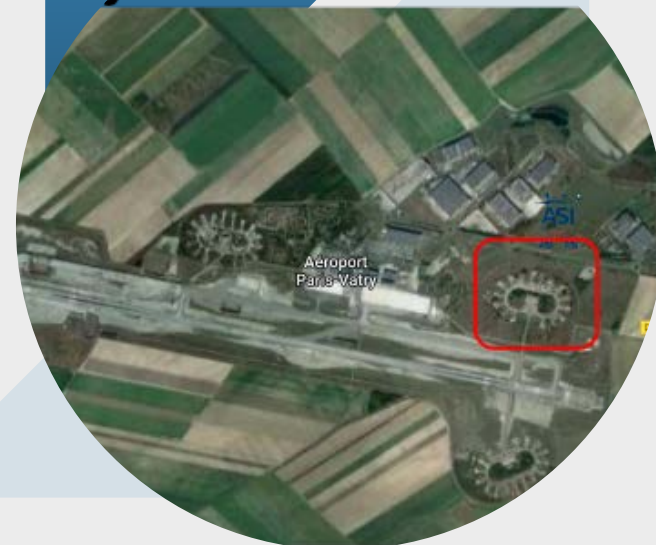
*The airport offers a complete array of services geared towards the needs of the aircraft operators or their customers through a tailored offering. Many road transportation companies have established loading docks and logistical premises. Operations are possible 24/7/365.*

### Paris-Vatry fulfills customer needs in many areas:

- Passenger and cargo flights, e-commerce delivery flights, pharma flights
- Hangar space available to stock goods (standard, temperature control areas, (CEIV Pharma certification in progress)
- Quick shipments between China and Europe (both ways, two flights per day)
- MRO, Maintenance, aircraft deconstruction services, modifications (ASI-Group)
- Recurrent training for commercial and private operators (airlines, business aviation, private)

*By signing a long-term agreement with ASI-Group, the Paris Vatry international airports establishes a strategy to become one of the main players in the maintenance, aircraft modification, MRO operations and aircraft deconstruction fields.*

*We convinced ASI-Group that, with the help of the local and regional authorities and the airport management's support, this new location will contribute to the continued growth of the company. This agreement with ASI-Group is a real long-term partnership that will allow both entities to continue to move forward".*





# ASI-Group announces the acquisition of the assets of Business and Commuter Aircraft (BCA)

Adding new competencies and solutions

ASI-Group (ASI-Innovation and ASI-Aviation) announced on May 7<sup>th</sup>, that they have acquired the assets of BCA, an MRO and STC house specialized in the Beechcraft King Air family. With this acquisition, ASI reinforces its catalog of solutions, modifications, and services offered to civilian, state, and military operators.

Combined with its new location at Paris-Vatry International airport and its historic base in Reims Prunay, ASI -Group creates a new excellence center geared towards MRO, aircraft modifications, avionics, mission systems installation, and services offerings for King Air operators. With a brand-new hangar over **2500 m<sup>2</sup>, 250 000 sq/ft**, fit to receive aircraft up to the B737 and A320), access to a runway capable of receiving **Super Heavy aircraft and possible operations 24/7/365 with custom and immigration services on-site**, operators from Europe, Africa, and eastern Europe have easy access to the facility.

ASI's avionics department designs, certifies, and install full glass cockpits retrofits or tailored avionics upgrade, specializing in the integration of heterogeneous special avionics systems into an integrated avionics solution. ASI is a certified dealership and installation center for the most prestigious avionics brands and has established solid business relationships with avionics solution providers in the civilian and military market (Garmin, Avidyne, Rockwell-Collins, Honeywell, Universal Avionics, Bendix-King, and many others). ASI not only provides avionics installations but also services such as RVSM certification, Barometric checks, equipment bench tests, and repairs.

ASI-Group has a long and successful track record in mission aircraft design and certification and has delivered turn-key solutions to operators in many countries:

- **Maritime Pollution surveillance**
- **Maritime Surveillance**
- **ISR: Missions Intelligence – Surveillance – Reconnaissance and data gathering**
- **Relay Platform: Radio and video real-time relay operations**
- **Special Missions: Mission related systems and modifications for military special missions**

Furthermore, ASI-Group, as a certified PART-145 MRO, offers all maintenance operations, scheduled or unscheduled for Reims-Cessna F406 Caravan II, Beechcraft King Air aircraft, and many other popular airframes.

*« Since its creation, ASI has acquired specialized technical knowledge on the F406, as we are the TC holder, and on the Beechcraft King Air family, both airframes being largely used by mission operators. The acquisition of the assets of BCA is a logical step in our growth strategy. We are now able to offer new solutions (modifications, STC's) to our customers and increase our reach on the national and international market. We can now offer customized solutions, including airframe modifications, certification, specialized systems, and avionics integration, MRO services. We also offer aircraft (with customized systems or not) lease and/or sales solutions. After adding a new location allowing us to receive aircraft up to the A320 family, we have increased our capacity to work on multiple airframes simultaneously, thus reducing lead times and costs for our customers" said Jean-Pierre Kohn, CEO*





# F406

## Modernization

## Program



# Reims Cessna F406 Caravan II *Modernization Program*

Making a great aircraft even better

After collecting data from F406 operators worldwide, ASI-Group has put together a long-term plan to:

- Increase F406 service life safely
- Enhance the global F406 characteristics and performances
- Facilitate maintenance
- Increase ergonomics and safety features
- Ensure long term continued airworthiness for the F406



# Reims Cessna F406 Caravan II *Modernization Program*

Making a great aircraft even better

## F406 Caravan II Modernization Program : *Avionics*

Making a great aircraft even better

Retrofit solutions to modernize the F406 avionics, better fit to mission and reduced pilot workload:

- **Garmin Glass-Cockpit:**  
Dual or single Garmin G600 Txi PFD/MFD
- **Genesys Integrated Avionics Solution**
- **Advanced navigators/FMS:**  
Universal, Rockwell-Collins, Avidyne, Garmin
- **Auto-pilot retrofits :**  
Dispose of older auto-pilot versions. Replace with modern 3 axis technology (Genesys or Garmin)
- **Engine parameters display options**



## F406 Caravan II Modernization Program: *Performance upgrades*

Increase performance, range, usability, and mission capability



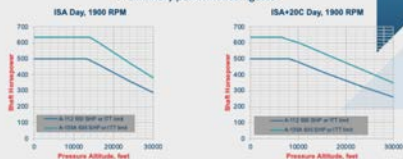
## F406 Caravan II Modernization Program : *Engine Upgrade*

Making a great aircraft even better

ASI is currently researching the interest of current operators to upgrade their engines to the P&WC PT6A-135A engine.

This STC can only become a reality if the market demand is sufficient to offset the cost of developing the STC.

Preliminary performance figures



## F406 Caravan II Modernization Program: *Generic Upgrades*

Increase performance, range, usability, and mission capability





# F406 Caravan II Modernization Program : **Avionics**

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# F406 Caravan II Modernization Program : Avionics

Fully integrated and communicating avionics suite

Garmin G600TXi Glass cockpit and avionics retrofit :  
Replaces the old legacy avionics with solid state modern and reliable avionics:

- Reduces maintenance and repairs on legacy avionics, where parts become scarce and expensive
- Increases usability of the aircraft to conduct its missions
- Decreases pilot workload
- Significant weight savings (typical: 60 kg)
- When including MVP-50 Engine monitors, brings digital engine parameters alarms, data logging, advanced engine management
- Allows mission preparation on the ground and upload of all mission parameters wirelessly into the avionic system



# F406 Caravan II Modernization Program : Avionics

Fully integrated and communicating avionics suite

## Installation of the full Genesys avionics pack:

- Integrated solution including, FMS/Navigator, WAAS GNSS, Radios, transponder and displays
- Integrates the Genesys 3100 fully digital attitude-based autopilot (IAS mode and envelope protection included and altitude preselect included)
- Replaces old legacy systems such as FMS, EFIS, SYMBOL GENERATOR, etc.
- Reduces costs of avionics preventive maintenance
- Reduces drastically the weight of installed avionics
- Augments mission capabilities
- Genesys Open System Architecture allowing multi sensor source integration – Ideal for mission aircraft



# F406 Caravan II Modernization Program : Avionics

Fully integrated and communicating avionics suite

Genesys 3100 fully digital, attitude-based autopilot:

- Modern autopilot, fully digital
- Replaces legacy autopilots that are hard and expensive to maintain
- Excellent servo life
- Brings new features:
  - Indicated Airspeed Mode
  - Yaw Damper available
  - Flight Director available
  - Altitude Preselect available
  - Vertical navigation
  - Enveloppe protection mode
  - Integrates with all types of avionics (glass-cockpit and legacy)





# F406 Caravan II Modernization Program : Engine Data

Fully integrated and communicating avionics suite

## MVP-50T Twin Engine data display

- Display all engine parameters
- Replaces steam gauges
- Alarms for parameters exceedance
- Brings new features:
  - Monitors electrical system, fuel systems, engine parameters, engine alarms, G forces monitoring
  - Records engine parameters, offers trend monitoring, records the last 1500 flights, downloadable by USB stick, export to engine monitoring packages
- Easy installation, flush mount, saves panel space



Video Presentation of the EI MVP-50T

### Annunciators

- Fourteen (14) system and engine annunciators displayed in two rows.
- Ten (10) additional main engine screen annunciators are located below these fourteen.

### Arc Gauges

- Large, easy-to-read digits
- Reliable and accurate.
- N1, N2, ITT and Torque displayed prominently.
- Can be set to blink when operating range reaches yellow/red.

### Digital Instruments

- Early diagnostics made easy.
- Three sections to display additional instruments in digital format.

### Instrument Navigation

- Intuitive, easy operation.
- Rotary knob with push selection.

### Remote Annunciators

- Can be installed anywhere in your field of vision.
- Quick alert when a function moves into a yellow or red operating range.

### Vertical Strip Gauges

- Large, easy-to-read digits
- Reliable, accurate, and programmable for any aircraft.
- Can be set to blink when operating range reaches yellow/red.

### USB Port

- Download flight data.
- Upload config and checklists.



# F406 Caravan II Modernization Program: *Performance upgrades*

Increase performance, range, usability, and mission capability

## F406 Caravan II Modernization Program : Propellers

Making a great aircraft even better

New STC allowing for the installation of five blade composite propellers:

- Improved take off, climb performances  
80 to 100 m (240 to 300 ft) less ground roll on take off, same cruise speed.
- Significant noise and vibration reduction
- Significantly better ground clearance  
(ground clearance increased by 16 cm)
- No life limit (no scrapping after two overhauls)  
TBO > 7 years with extension, no life limit on blades
- Ownership costs reduced over time  
Individual blade replacement with prop on wing possible



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## F406 Caravan II Modernization Program : Auxiliary Fuel Tanks

Making a great aircraft even better

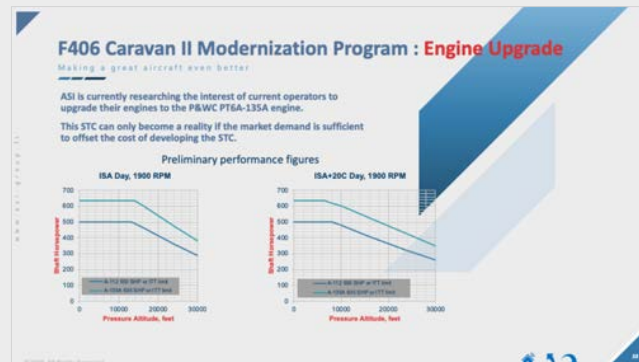
More Range, more usability:

- Two auxiliary fuel tanks installed in engine nacelles:  
+183 l (48.5 USGAL)
- Factory design & certification
- Field removal and reinstall
- Lightweight solution (69 lbs per side)
- Easily managed by the pilot




Tank structure: Composite

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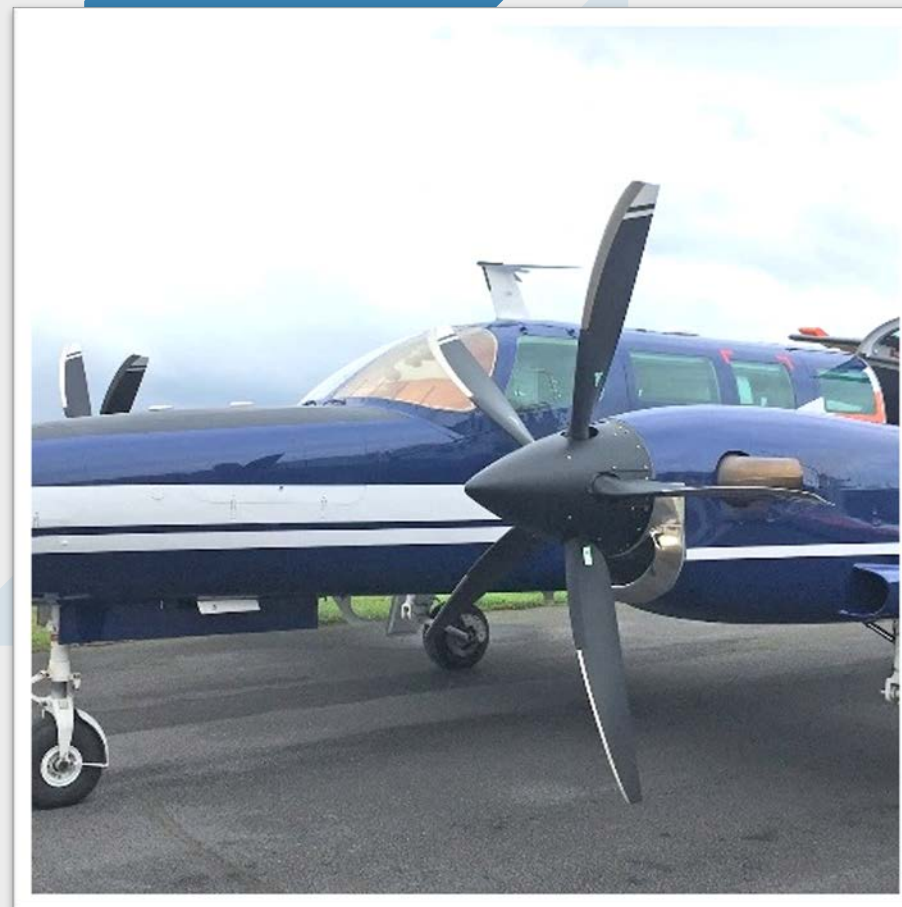


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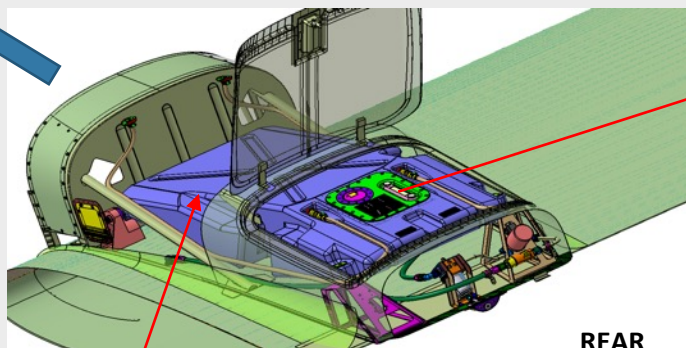
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Making a great aircraft even better

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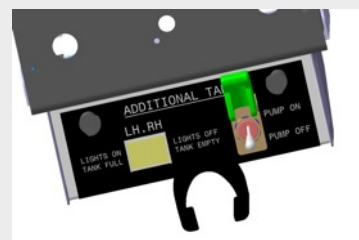
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FWD



REAR

**Tank structure:**  
Composite



ENGINE

ADDITIONAL FUEL TANK

MTOW : 9,850 lbs / 10,000 Ft  
ISA condition (no wind )  
Standard flight

ENDURANCE

Max CRUISE

ADDITIONAL TANKS

ENDURANCE+ 15%

RANGE\*+15%



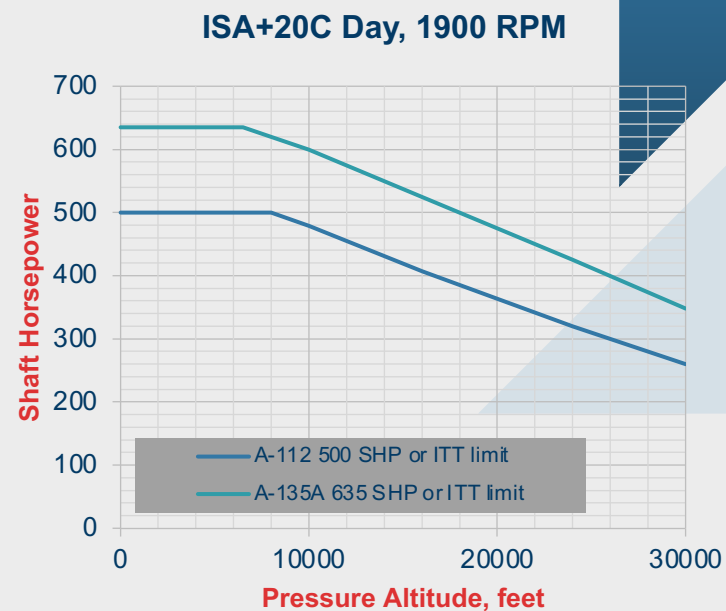
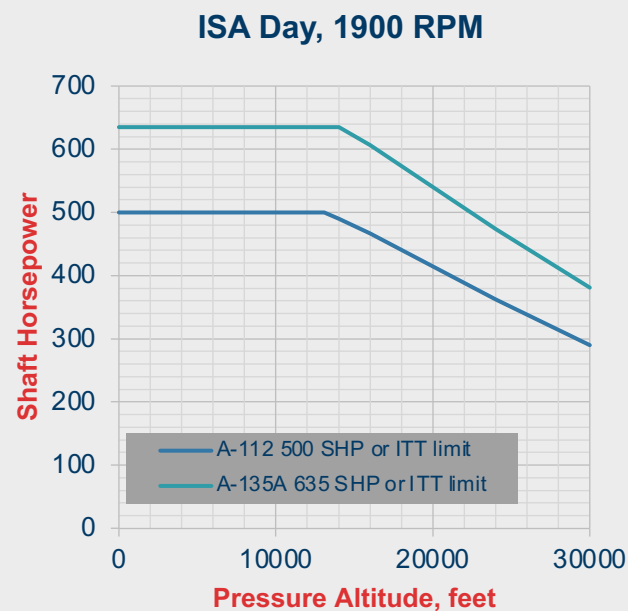
# F406 Caravan II Modernization Program : Engine Upgrade

Making a great aircraft even better

ASI is currently researching the interest of current operators to upgrade their engines to the P&WC PT6A-135A engine.

This STC can only become a reality if the market demand is sufficient to offset the cost of developing the STC.

## Preliminary performance figures

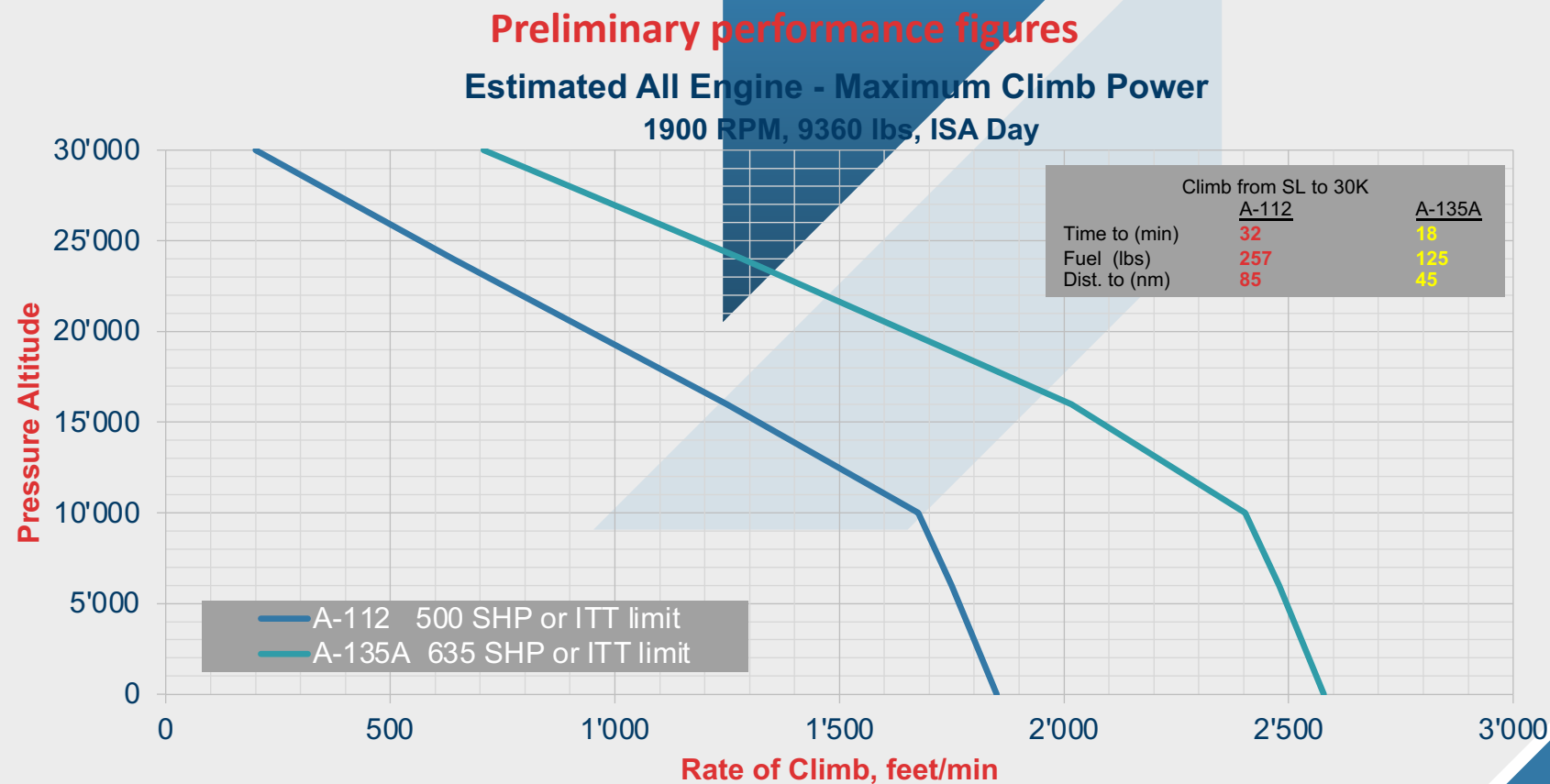


# F406 Caravan II Modernization Program : Engine Upgrade

Making a great aircraft even better

**More Power, more performance by hot weather or for high altitude operations:**

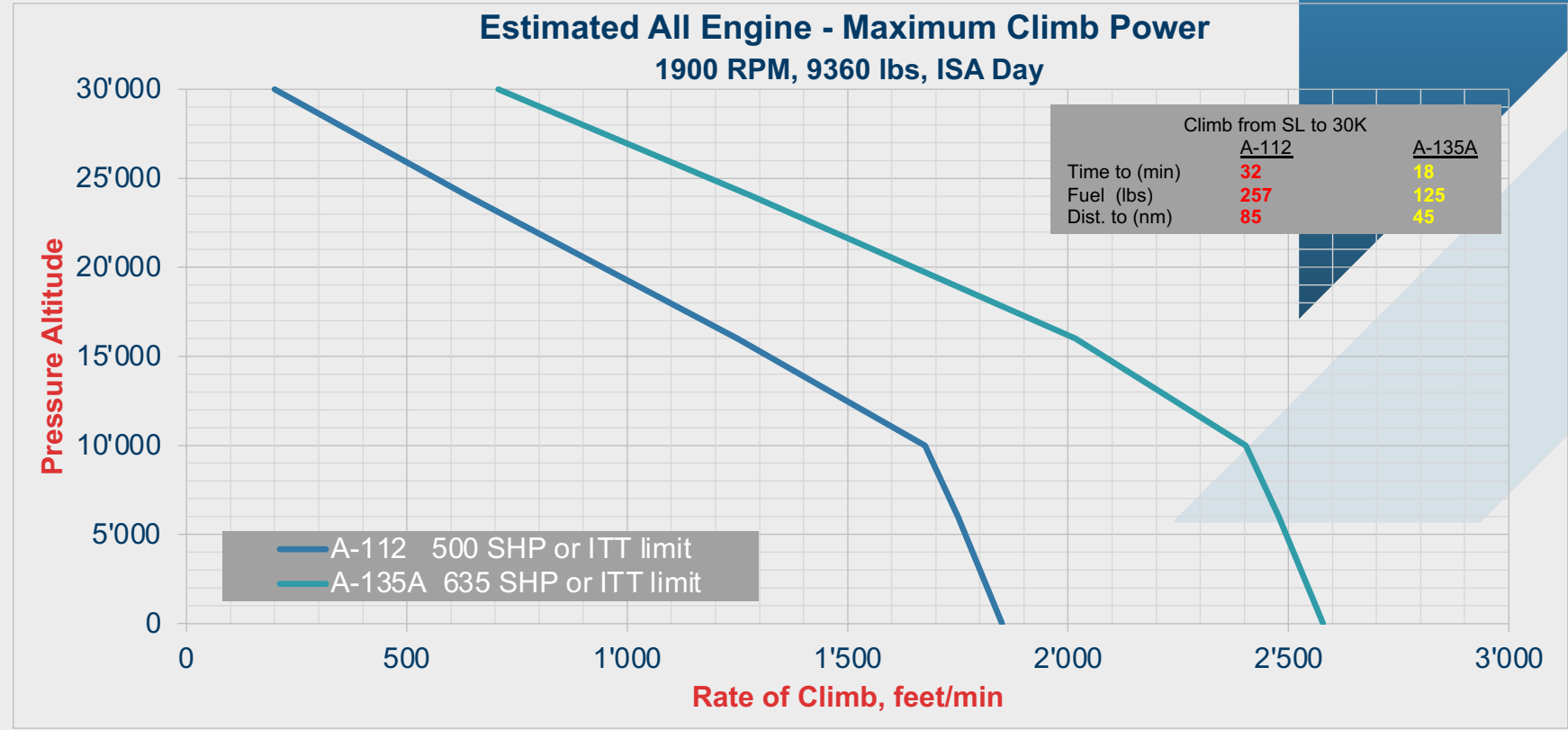
- Working on an STC that allows replacement of the P&WC PTA-112 with P&WC PT6A-135 engines
- Fuel flow dramatically reduced
- 635 shp available per engine
- No weight penalty, weights are similar



# F406 Caravan II Modernization Program : Engine Upgrade

Making a great aircraft even better

## Preliminary performance figures

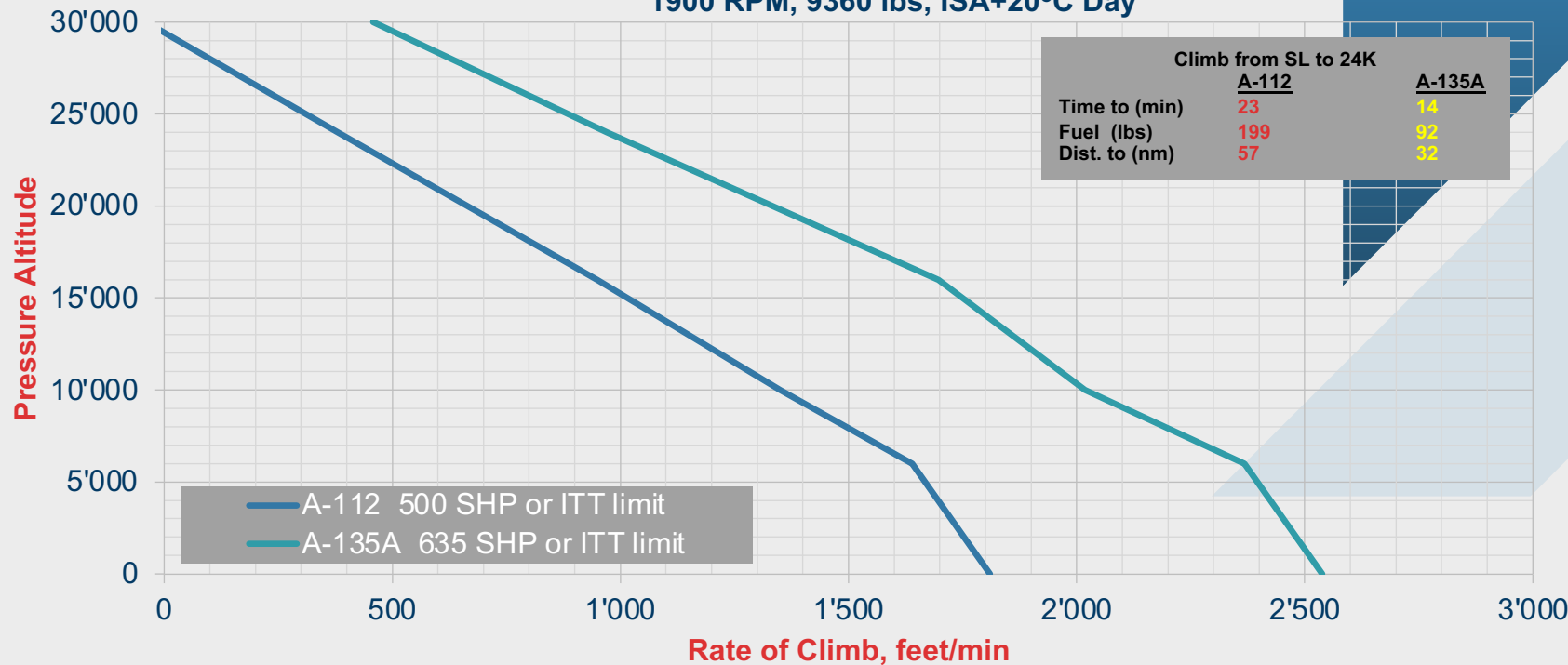


# F406 Caravan II Modernization Program : Engine Upgrade

Making a great aircraft even better

## Preliminary performance figures

Estimated All Engine - Maximum Climb Power  
1900 RPM, 9360 lbs, ISA+20°C Day





# F406 Caravan II Modernization Program : Engine Upgrade

Making a great aircraft even better

## The next steps :

- Operator declares his interest in the STC
- ASI-Group creates a proposal, including core value of current engines
- Operator and ASI-Group agree on tentative timetable
- ASI-Group and partners develop and certify the STC
- Operator and ASI-Group establish a work schedule (time, duration, place where work is done) and finalize contract



# F406 Caravan II Modernization Program: *Generic Upgrades*

Increase performance, range, usability, and mission capability

## F406 Caravan II Modernization Program : Interior Linings

Making a great aircraft even better

### Why new interior linings?

- The original plastic linings don't age well (time and UV's)
- The plastic becomes brittle and breaks easily when they are removed for maintenance
- Their repair is difficult, most of the time impossible
- The original linings are not fabricated
- Doesn't make economical sense to relaunch production with identical materials



## F406 Caravan II Modernization Program : iPad & Tablet cockpit mounts

Making a great aircraft even better

### Upgrade benefits:

- Secure iPad or tablet in the cockpit
- Reduced workload for pilots
- Safer operations
- May be connected to the avionics (wireless)
- STC'd for immediate use



Attachment point for iPad or Tablet

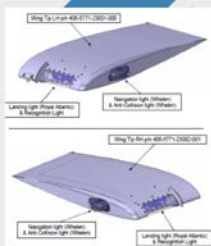
Attachment point for iPad or Tablet

## F406 Caravan II Modernization Program : LED Lighting

Making a great aircraft even better

### Upgrade benefits:

- No more burned bulbs
- Reduced electrical load
- Higher visibility, increased safety
- Durability (10'000 hours continuous usage)
- Available for interior and exterior lighting
- Interior lighting available on dimmer and multiple colors
- STC'd for immediate use

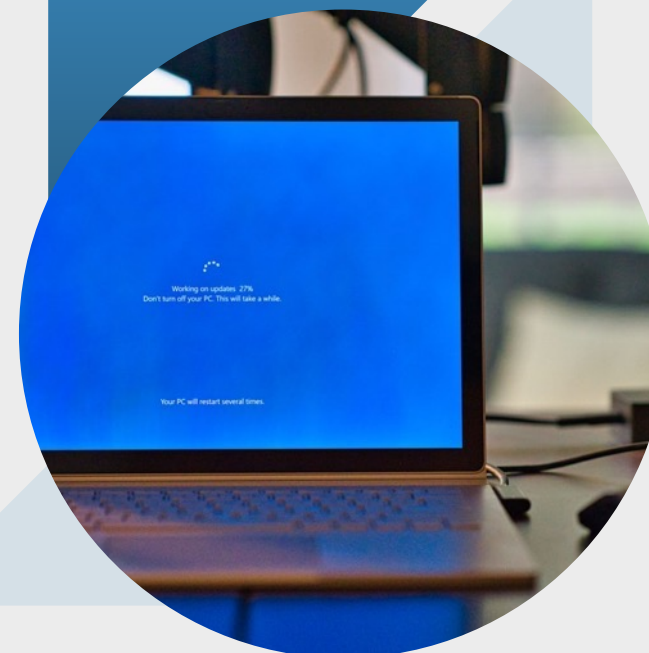


## F406 Caravan II Modernization Program : DC outlets in cockpit and cabin

Making a great aircraft even better

### Upgrade benefits:

- Provides charging DC current for iPad or tablets
- Safe installation
- No breaker tripping or fire hazard
- No HF noise in audio
- Charges all types of tablets (even iPad pro)
- STC'd for immediate use



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Making a great aircraft even better

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# F406 Caravan II Modernization Program : Interior Linings

Making a great aircraft even better

## Upgrade benefits:

- New composite material used
- Resists to UV
- Robust and durable
- Easier to remove and reinstall than the old plastic linings. Quick turnaround after maintenance operations
- Allows durability even when performing quick change operations (cargo/passenger)



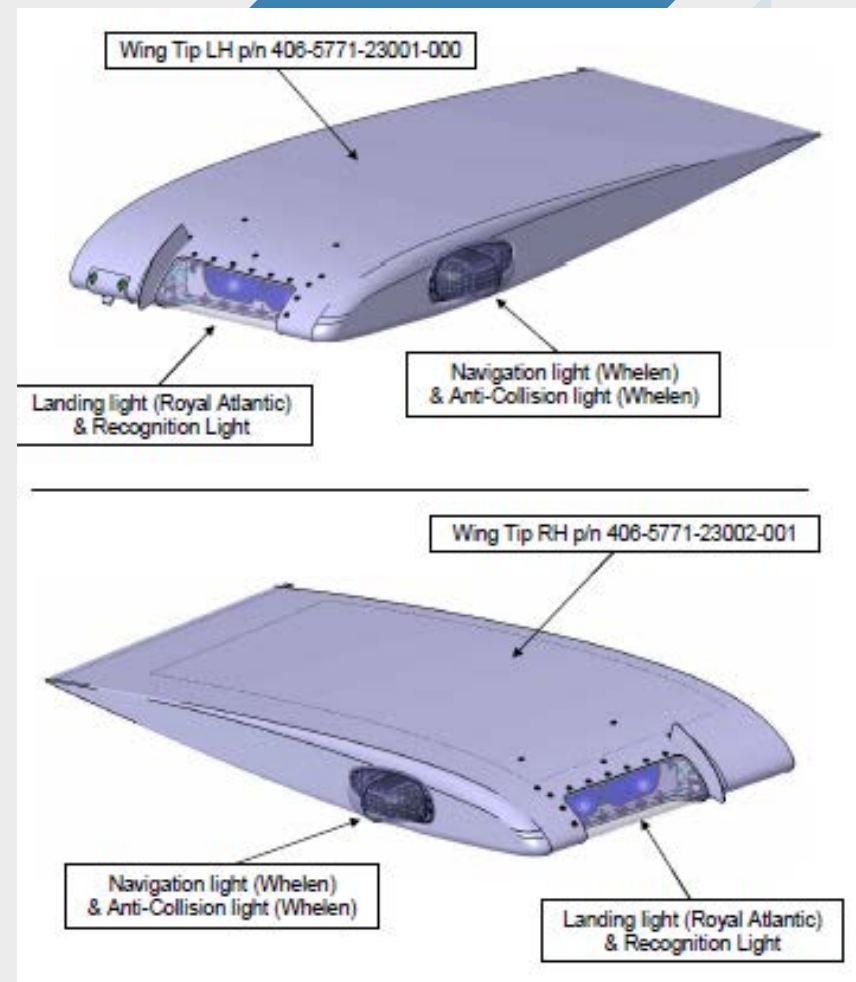


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Attachment point for iPad  
or Tablet

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*Entirely focused on Your mission*