



ATR UPGRADE SERVICES CATALOGUE

ATR 42 & 72
PRODUCT & SERVICES

Issue 04 - January 2021

ATR
UPGRADE SERVICES



This catalogue provides a general overview of the main Retrofit Solutions intended to enhance the efficiency, comfort, and operation of ATR aircraft. The content represents a summary of each modification.

Price estimates listed in this document are only intended to give the customer an order of magnitude of the modification price. A precise price can be established only after a dedicated study for each impacted MSN, depending on its actual configuration.

Furthermore, the supply, or not, of the equipment related to the retrofit solutions will be part of the commercial discussions.

Applicability of any presented modification depends on aircraft configuration and is subject to aircraft configuration review by the ATR Engineering Department.

Information on weight change and price range is given as estimated guidelines only, and may vary depending on the configuration of a particular aircraft.

For further information, please contact your dedicated Sales Services Director.

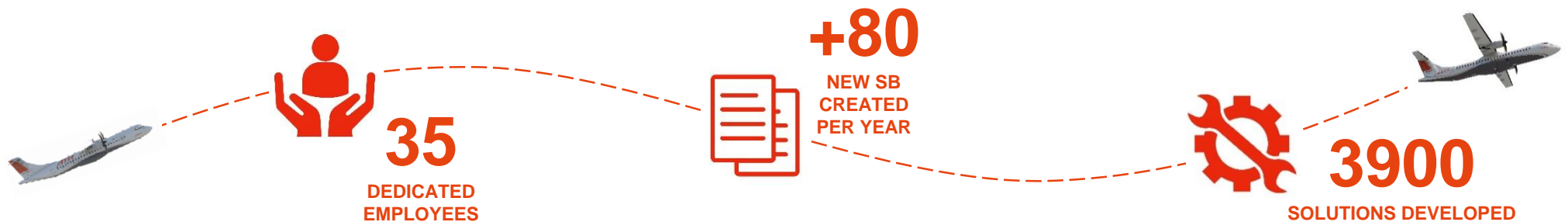
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WHY CHOOSE ATR RETROFIT SOLUTION

ATR supports its customers in their business development through upgrade solutions enhancing passenger experience, aircraft performance and optimal adaptation to airlines' requirements.

Choosing ATR Retrofit Solutions guarantees that the aircraft documentation will be automatically updated, simplifying configuration tracking of the aircraft and making future maintenance tasks easier to manage.

Manufacturer upgrades improve aircraft asset value & re-marketability.










MANUFACTURER EXPERTISE	QUALITY	DOCUMENTATION	TECHNICAL SUPPORT	CUSTOMER'S VALUE
<ul style="list-style-type: none"> Best analysis & quality Up-to-date technology Proven technical solutions 	<ul style="list-style-type: none"> OEM certified solutions Performance standards Continuous airworthiness and regulation evolutions 	<ul style="list-style-type: none"> Aircraft documentation update, configuration, & tracking Post-modification definition allowing well-known basis for future evolutions 	<ul style="list-style-type: none"> During SB installation & throughout the aircraft's life Dedicated working parties 	<ul style="list-style-type: none"> Operational optimization Fleet harmonization Direct maintenance cost reduction











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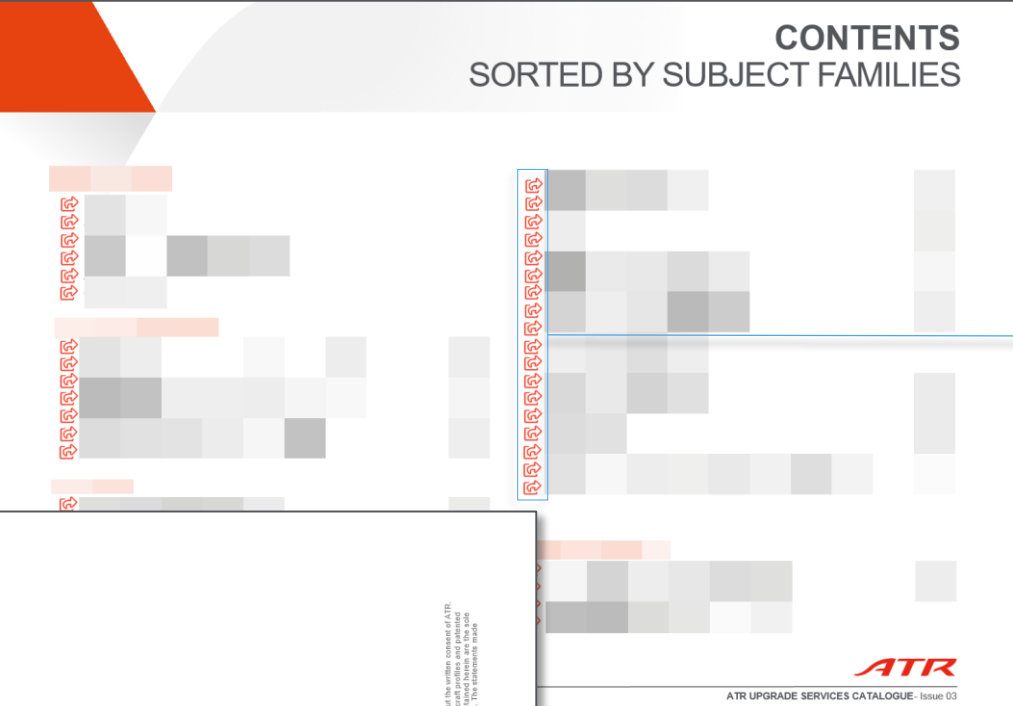
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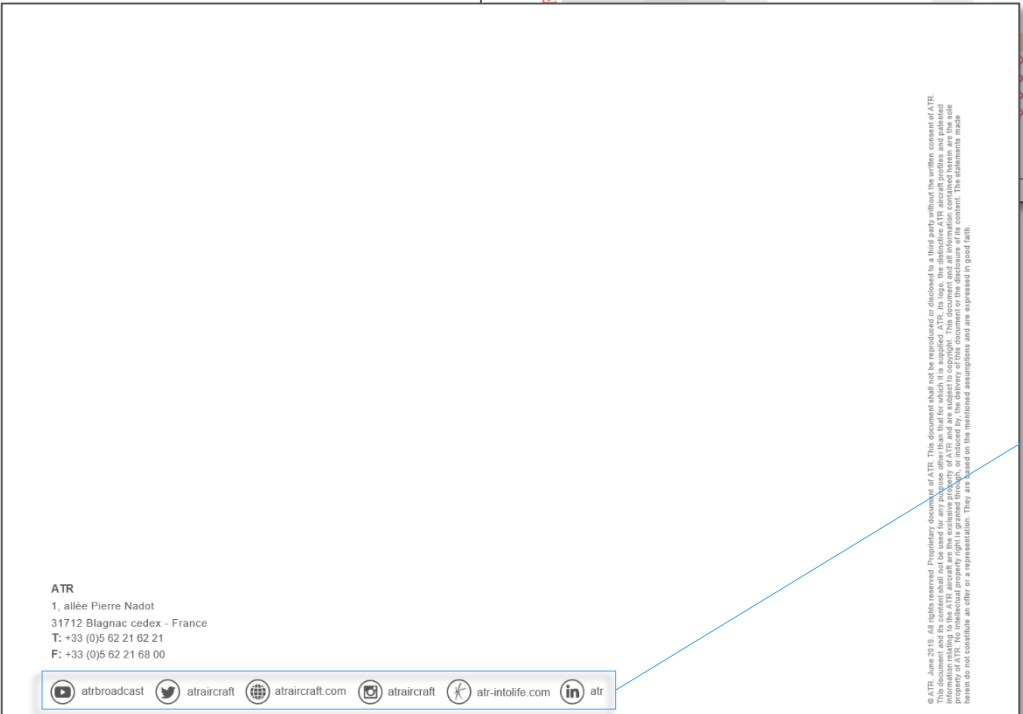
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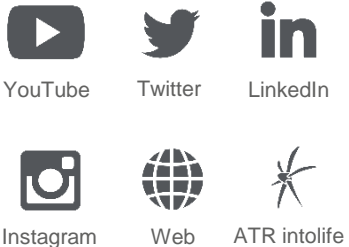


Clickable icons to access to the solution page.



Social medias

The icons are clickable to allow you to get close to us and our offers.



USER GUIDE

CATALOGUE

ATA XX CATEGORY - ATA common reference number and category

TITLE SUBTITLE - Solution title and subtitle

DESCRIPTION - Solution technical description

BENEFITS - List(s) of solution benefits

PRE-REQUISITE - Necessary matters to apply to conform to the standard solution

WEIGHT CHANGE - Weight evolution to apply the solution

PACKAGE CONTENT - Included package of the solution

APPLICABILITY - Applicability of the solution in 3 categories;

- Aircraft models
- Avionics
- & Cabin

SEE ALSO - Link to related content page

Benefit icons

- Operational cost savings
- Maintenance cost savings
- Operational boost
- Passenger comfort
- Crew efficiency

Commercial offers

- Range price
- Estimated lead time
- Estimated man hour

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USER GUIDE

ATR AIRCRAFT GLOSSARY

TERMS & ABBREVIATIONS	DEFINITION
ARMONIA	The newest cabin interiors of ATR aircraft installed on ATR 42 MSN 859 and ATR 72 MSN 958 and higher (with exceptions).
LEGACY	All avionics suite systems embedded on ATR aircraft before New Avionics Suite (NAS).
NEW AVIONICS SUITE (NAS)	The latest avionics system of ATR aircraft, installed on ATR 42 MSN 859 and ATR 72 MSN 940 and higher (with exceptions), this avionics suite is manufactured by Thales.
NEW LOOK	The cabin interiors of ATR aircraft installed prior to the Armonia cabin interior, installed on ATR 42 MSN 443 and ATR 72 MSN 468 and higher (with exceptions).
ORIGINAL	The cabin interiors installed on ATR aircraft before New Look cabin interiors.
ACARS	A ircraft C ommunication A ddressing and R eporting S ystem
ACD	A ircraft C onfiguration D ata
ACM	A ir C ycle M achine
ACMS	A ircraft C ondition M onitoring S ystem
ADF	A utomatic D irection F inder
ADS-B	A utomatically D ependent S urveillance- B roadcast
AFM	A irplane F light M anual
ASDB	A ircraft S pecific D ata B ase
ATC	A ir T raffic C ontrol
ATM	A ir T raffic M anagement
B-RNAV	B asic A rea N avigation (also called RNAV5)
CMP	C onfigurations M aintenance and P rocedure
CVR	C ockpit V oice R ecorder
DME	D istance M easuring E quipment
DMU	D ata M anagement U nit
e/TSO	e uropean T echnical S tandard O rders
EASA	E uropean A viation S afety A gency
ETOPS	E xtended-range T win-engine O perations



USER GUIDE

ATR AIRCRAFT GLOSSARY

TERM & ABBREVIATION	DEFINITION
EU/OPS	E uropean O perational regulation (Regulation (EC) No 859/2008)
EWD	E ngine/ W arning D isplay
FAA	F ederal A viation A dministration
FDAU	F light D ata A cquisition U nit
FDR	F light D ata R ecorder
fh	F light hours
ft	F eet
GNSS	G lobal N avigation S atellite S ystem
HEPA	H igh- E fficiency P articulate A ir
HF	H igh F requency
ICAO	I nternational C ivil A viation O rganization
IEEE	I nstitute of E lectrical and E lectronics E ngineers
IFE	I n F light E ntertainment
ILS	I nstrument L anding S ystem
ISA	I nternational S tandard A tmosphere
LNAV	L ateral N avigation
LOPA	L ayout O f P assenger A ccommodation
LPV	L ocalizer P erformance with V ertical guidance
MCDU	M ultifunction C ontrol & D isplay U nit
MCU	M odular C oncept U nit
MKR	M arker
MLS	M icrowave L anding S ystem
MPC	M ulti P urpose C omputer
MSN	M anufacturer's S erial N umber
N/A	N ot A pplicable / N ot A vailable
NAS	N ew A vionic S uite
NM	N autical M ile



USER GUIDE

ATR AIRCRAFT GLOSSARY

TERM & ABBREVIATION	DEFINITION
P/N	Part Number
PAX	Passenger
PMAT	Thales data loading software
P-RNAV	Precision Area Navigation (also called RNAV1)
RIL	Retrofit Information Letter
RNP	Required Navigation Performance
RNP APCH	Required Navigation Performance Approach
RNP AR	Required Navigation Performance Authorization Required
RTCA	Radio Technical Commission for Aeronautics
RTO	Reserve Take-Off
SBAS	Satellite-Based Augmentation System
SELCAL	Selective Calling System
SSCVR	Solid State Cockpit Voice Recorder
STC	Supplemental Type Certificate
T ² CAS	Terrain and Traffic Collision Avoidance System
T ³ CAS	Transponder and Terrain and Traffic Collision Avoidance System
TIC	Turbine Inlet Control
T-PED	Transmitting Portable Electronic Device
TSO	Technical Standard Orders
ULB	Underwater Location Beacon
UTC	Coordinated Universal Time
VCP	Virtual Control Panel
VHF	Very High Frequency
VNAV	Vertical Navigation
VOR	VHF Omnidirectional Radio Range
VSB	Vendor Service Bulletin

ATA 00 GENERAL

ATR
UPGRADE SOLUTION



DESCRIPTION






Extend the environmental envelope to -45°C and allow operations in extreme cold conditions. This modification involves only documentation updates.

For operations in extreme cold conditions, attention should be directed to suggested cold weather modifications and maintenance tasks. For fuller information please refer to service letter ATR42-30-5015 or ATR72-30-6008.

NOTE: *The environmental envelope is limited to -35°C on aircraft not equipped with the modification.*

BENEFITS

Extended operational envelope such as operations in extreme cold temperature conditions.

				
OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation



PRE-REQUISITE

Wheels/ tires configuration (please contact us).

WEIGHT CHANGE

NONE

SEE ALSO

-  Extension to -54°C
-  Extension to ISA +40°C

PRICE RANGE

From \$500 per aircraft

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MAN POWER

Depending on the a/c configuration

Subject to a possible specific adaptation to the relevant MSN.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

DESCRIPTION

Extend the environmental envelope to -54°C and allow operations in extreme cold conditions. This modification involves documentation updates and modifications to the nose landing gear and the main landing gear along with installation of coil seal actuated end seals on the propeller blades.

For operations in extreme cold conditions attention should be directed to suggested maintenance and operation tasks. For fuller information please refer to service letter ATR42-30-5011.

NOTE: The environmental envelope is limited to -35°C on aircraft not equipped with the modification.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-300/ -320	Legacy	YES	Original	N/A
ATR 72	N/A	New Avionics Suite	NO	New Look	N/A
				Armonia	N/A

BENEFITS

Extended operational envelope such as operations in extreme cold temperature conditions.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply (only for landing gears modification)

PRE-REQUISITE

Wheels & brakes configuration (please contact us).

WEIGHT CHANGE

NONE

SEE ALSO

- ↗ Extension to -45°C
- ↗ Extension to ISA +40°C

PRICE RANGE

From \$ 700 per aircraft

ESTIMATED LEAD TIME

4 months

ESTIMATED MAN POWER

16 hours

Subject to a possible specific adaptation to the relevant MSN.






DESCRIPTION

Extend the environmental envelope to ISA +40 (limited to + 50°C) and allow operations in extreme hot conditions. This modification involves only operational documentation updates; no maintenance program modification is needed.

NOTE: *The environmental envelope is limited to ISA +35 on aircraft not equipped with the modification.*

BENEFITS

Extended operational envelope such as operations in extreme hot temperature conditions.

				
OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation



PRE-REQUISITE

NONE

WEIGHT CHANGE

NONE

SEE ALSO

-  Extension to -45°C
-  Extension to -54°C

PRICE RANGE

From \$ 500 per aircraft

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-300/ -320	Legacy	YES	Original	N/A
ATR 72	-211/ -212/ -212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

DESCRIPTION

Operate with 15 knot tailwind at take-off and landing or 20 knot tailwind at take-off, gust included, allowing operations under specific weather conditions. Only operational documentation update is needed, no hardware change is necessary.

NOTE: On aircraft not equipped with the modification the tailwind limit at take-off is 10 knot.

BENEFITS

Extended operation envelope such as operations under specific weather conditions.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation

PRE-REQUISITE	NONE
WEIGHT CHANGE	NONE
SEE ALSO	Operations on narrow runways
PRICE RANGE	From \$ 3,000
ESTIMATED LEAD TIME	5 weeks
ESTIMATED MAN POWER	1 hour

Subject to a possible specific adaptation to the relevant MSN.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	STANDARD	Legacy	YES	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

DESCRIPTION

Enable operational capability on narrow runways down to a minimum of 14 meters (46 ft) width instead of 30 meters (98 ft). This modification consists in updating the Aircraft Flight Manual (AFM) and the Flight Crew Operating Manual (FCOM).

NOTE: Embodiment of this modification entails a crosswind limit correction. For fuller information please refer to the AFM.

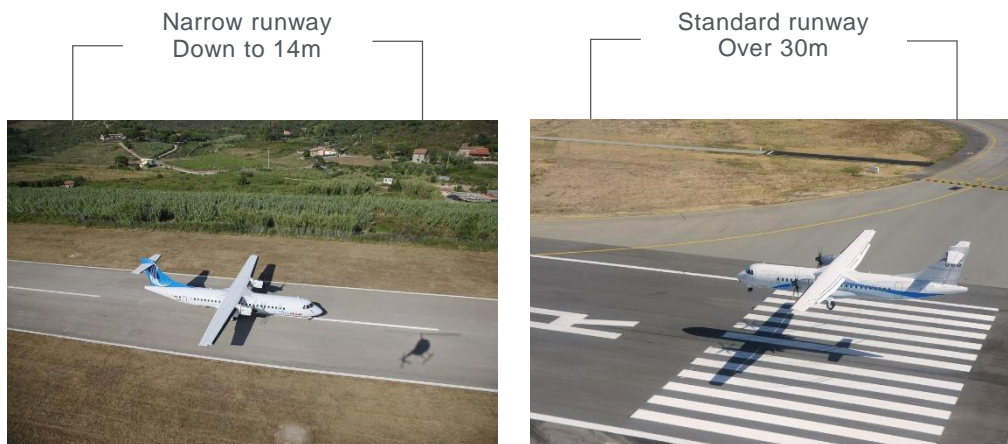
BENEFITS

Extended operations envelope such as operations on runways with local limitations.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

PRE-REQUISITE

NONE

WEIGHT CHANGE

NONE

SEE ALSO

- Take-off at RTO – 100% power
- Runways with a 2% or over slope factor

PRICE RANGE

From \$ 500

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Depending on aircraft models and configuration, two modifications are available.

- **For ATR42-300/320 equipped with Legacy Avionics:** Inhibit the EXCESS CABIN ALTITUDE function in order to allow operations on high altitude runways without having a red warning at take-off.
- **For ATR42-500 or ATR72-212A equipped with New Avionics Suite:** update the NAS options configuration file in order to allow operations on high altitude runways.

In both cases this modification validates the aircraft configuration to enable high altitude airport operations up to 11,000 ft instead of 8,500 ft above mean sea level on aircraft not equipped with the modification.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-300/ -320/ -500	Legacy	YES	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

Extended operation envelope such as operations on runways with local limitations.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply (only for aircraft equipped with Legacy avionics)
- NOFU (only for aircraft equipped with New Avionics Suite)

PRE-REQUISITE	Minimum software version: Standard 2
WEIGHT CHANGE	NONE
SEE ALSO	<ul style="list-style-type: none"> ↻ Take-off at RTO – 100% power ↻ Operations on narrow runways
PRICE RANGE	From \$ 5,000
ESTIMATED LEAD TIME	5 weeks
ESTIMATED MAN POWER	<ul style="list-style-type: none"> • 35 hours (Legacy) • 1 hour (New Avionics Suite)

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Enable take-off and landing on runways sloping by a factor of 2% or over without hardware modification.

This modification induce an update of tailwind limit.

Slope limitations are linked to aircraft models. For fuller information, please, refer to AFM.

NOTE: *Maximum mean runway slope for aircraft not equipped with the modification is +/- 2%.*

Runway slope permitted with this modification :

	Take-off	Landing	
Tailwind limit	10 kt	Downhill: 10 kt up to -2% runway slope, 5 kt between -2% and -4.5%	Uphill: 10 kt
Maximum mean runway slope	-4.5% / +2%	-4.5% / +4.5%	



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-300/ -320/ -500	Legacy	YES	Original	N/A
ATR 72	-211/ -212/ -212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

Extended operation envelope such as operations on runways with local limitations.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation

PRE-REQUISITE

NONE

WEIGHT CHANGE

NONE

SEE ALSO

- Take-off at RTO – 100% power
- Operations on narrow runways
- Operations on high altitude runways



PRICE RANGE

From \$ 500



ESTIMATED LEAD TIME

5 weeks



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Apply a certified procedure to use the RTO (Reserve Take-Off) power to improve take-off performances on relatively short runways, enabling payload gain.

When using the RTO, 100% of the engine power available is used from brake release, instead of 90% in normal take-off conditions.

AFM updated, with the addition of new performance charts.

Examples of take-off performance improvements (ISA, sea level conditions):

	ATR 42-500	ATR 72-212A
Shorter take-off run	-163 ft Runway 3 663 ft + 3 500 ft For TOW = 18 164 kg	-143 ft Runway 4 143 ft + 4 000 ft For TOW = 22 144 kg
Higher payload at take-off	+368 kg TOW 17 796 kg + 18 164 kg For runway = 3 500 ft	+342 kg TOW 21 801 kg + 22 143 kg For runway = 3 500 ft








APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	YES	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

Increase of the allowable take-off and landing weight at airports with weight limitations induced by climb constraints (second segment, obstacles).

				
OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation




PRE-REQUISITE

Applicable only on aircraft equipped with PW127M engine.

WEIGHT CHANGE

NONE

SEE ALSO

-  Operations on high altitude runways
-  Install boost function
-  Steep slope approach capability

PRICE RANGE

From \$ 2000

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

ATA 08 LEVELING & WEIGHING

ATR
UPGRADE SOLUTION



DESCRIPTION

Increase aircraft weight characteristics in order to meet customer operational needs.
The maximal weight characteristics per ATR aircraft model are stated in the table below.

	ATR 42-300/320	ATR 42-400	ATR 42-500
MTOW Maximum Take-Off Weight	16 900 kg	17 900 kg	18 600 kg
MZFW Maximum Zero Fuel Weight	15 540 kg	16 300 kg	17 000 kg
MRW Maximum Ramp Weight	17 070 kg	18 070 kg	18 770 kg
MLW Maximum Landing Weight	16 400 kg	17 600 kg	18 300 kg
	ATR 72-101 / -102 / -201 / -202 / -211 / -212		ATR 72-212A
MTOW Maximum Take-Off Weight	22 000 kg		23 000 kg
MZFW Maximum Zero Fuel Weight	20 000 kg		21 000 kg
MRW Maximum Ramp Weight	22 030 kg		23 170 kg
MLW Maximum Landing Weight	21 350 kg		22 350 kg






APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

Weight adjustments consistent with operational needs.
(e.g. increase of transportation capability)

				
OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Update of operational documentation
- Kit supply (if needed)



PRE-REQUISITE

NONE

WEIGHT CHANGE

From none to + 5 kg (+ 11 lb) depending of the aircraft configuration (minor structural reinforcement to be applied or not).

SEE ALSO

-  Multiple weight variant capability
-  Increase maximum weights on unpaved runways

PRICE RANGE

From \$ 10,000 per 100 Kg MTOW increase

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MAN POWER

From 1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

ATR72-500 and ATR-600 aircraft equipped with modification 06404 (dry unpaved runways operations) are limited to the following maximum weights while operating on unpaved runways:

	Unpaved runway operations
MTOW (Maximum Take-Off Weight)	21 500 kg (46296 lb)
MZFW (Maximum Zero Fuel Weight)	19 700 kg (44092 lb)
MLW (Maximum Landing Weight)	21 350 kg (46296 lb)

Unpaved runways operations generate specific ground loads on zones like landing gears and fuselage.

To allow a higher Design Weights (MTOW, MLW, and MZFW), static and fatigue loads justification and relevant structure substantiation have been performed. Take-off and landing performance were also reassessed.

The **increased design weights for operation on unpaved runways** are as follow (Maximum Ramp Weight (MRW) unchanged):

	Weight	WV 20	WV 30	WV 40	WV 50
PAVED	MTOW	22 500 kg	22 500 kg	22 800 kg	23 000 kg
	MZFW	20 300 kg	20 500 kg	20 800 kg	21 000 kg
	MRW	22 670 kg	22 670 kg	22 970 kg	23 170 kg
	MLW	22 350 kg	22 350 kg	22 350 kg	22 350 kg
UNPAVED	MTOW	22 500 Kg	22 500 Kg	22 500 Kg	22 500 Kg
	MZFW	20 300 kg	20 300 kg	20 300 kg	20 300 kg
	MLW	22 350 kg	22 350 kg	22 350 kg	22 350 kg

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	N/A	Legacy	N/A	Original	N/A
ATR 72	-212A	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

- Up to 1,000 kg (2,200 lb) extra MTOW and +1,300 Kg (2.870 lb) on MZFW
- Increase transportation capability for passengers, cargo or fuel.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation

PRE-REQUISITE

Unpaved runways

WEIGHT CHANGE

NONE

SEE ALSO

- ↔ Weight variant change
- ↔ Unpaved runway operations

PRICE RANGE

From \$ 60,000

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Declare a lower Maximum Take-Off Weight (MTOW) among several possible certified values, according to its flight/dispatch conditions and then, to make it able to operate their aircraft within particular weight and balance limits.

Before each flight, the airline chooses a Weight Variant at which it wishes to operate its aircraft, among the different available weight allowances, then uses the relevant Load and Trim Sheet according to the selected Weight Variant.

The list of operational Weight Variants values is mentioned in the aircraft flight manual (AFM) and in the weight and balance manual (WBM).

NOTE: Design certified weight limitations are not impacted and no modifications are to be performed on the aircraft, unless the airline wishes to extend the weight variant range.

* Capability subject to local authorities acceptance

	WV 00	WV 10	WV 20	WV 30	WV 40	WV 50
MTOW (Maximum Take-Off Weight)	21 000 kg (46 296 lb)	22 000 kg (48 501 lb)	22 500 kg (49 603 lb)	22 500 kg (49 603 lb)	22 800 kg (50 265 lb)	23 000 kg (50 705 lb)
MZFW (Maximum Zero Fuel Weight)	20 000 kg (44 092 lb)	20 000 kg (44 092 lb)	20 300 kg (44 753 lb)	20 500 kg (45 194 lb)	20 800 kg (45 856 lb)	21 000 kg (46 296 lb)
MRW (Maximum Ramp Weight)	21 170 kg (46 671 lb)	21 180 kg (46 688 lb)	22 670 kg (49 978 lb)	22 670 kg (49 978 lb)	22 970 kg (50 640 lb)	23 170 kg (51 080 lb)
MLW (Maximum Landing Weight)	21 000 kg (46 296 lb)	21 850 kg (48 170 lb)	22 350 kg (49 273 lb)	22 350 kg (49 273 lb)	22 350 kg (49 273 lb)	22 350 kg (49 273 lb)

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	-212A	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

Optimization of airport tax related to aircraft declared weight.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
✓	-	-	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational publications

PRE-REQUISITE

Certification of the aircraft to the highest MTOW value

WEIGHT CHANGE

NONE

SEE ALSO

Weight variant change



PRICE RANGE

From \$ 2,000



ESTIMATED LEAD TIME

5 weeks



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

ATA 21

AIR CONDITIONING

ATR
UPGRADE SOLUTION



ENVIRONMENTAL CONTROL SYSTEM HONEYWELL TIC VALVE & ACM UPGRADE

DESCRIPTION

The **Turbine Inlet Control (TIC) Valve** is installed on Environmental Control System units. TIC Valve is designed to control the temperature of air at turbine inlet and therefore to protect it against excessive temperature.

TIC valve has been redesigned to improve performance over time by:

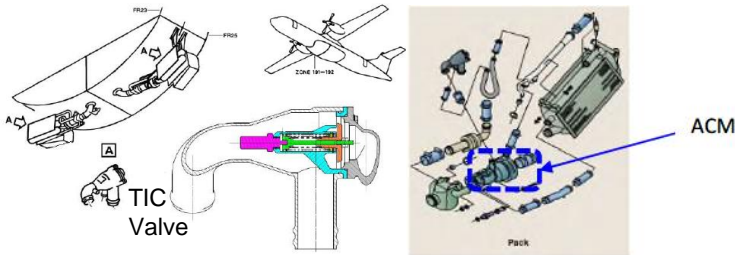
- New sensing element introduction
- Valve head and seat redesign

Refer to ATR RIL 2018-04 for more information and to Honeywell Aerospace **Service Bulletin N°5618C-21-672** for procedures to upgrade and re-identify the TIC valve.

Air Cycle Machines (ACM) is also part of the Environmental Control System's unit.

To improve the reliability of the ACM, a new cooling turbine was designed to have an improved performance life. The upgrade of the ACM consists in the installation of a more robust journal bearing, improved compressor end and turbine shaft seal assemblies.

Refer to ATR RIL 2019-05 for more information and to Honeywell Aerospace **Service Bulletin N°1600D-21-683** for procedures to upgrade and re-identify the ACM.



Note:
Modification is only applicable on aircraft equipped with PW 127 engines. Modification of both ACM on same aircraft is part of ECS improvement kit embodiment

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	YES
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

- TIC valve and ACM reliability improved
- Fully interchangeable with the previous P/N

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	-	-	✓

PACKAGE CONTENT

Refer to Honeywell VSB 5618C-21-672 and 1600D-21-683.

PRE-REQUISITE	Honeywell ECS upgrade
WEIGHT CHANGE	NONE
SEE ALSO	Honeywell ECS upgrade
PRICE RANGE	Refer to RILs 2018-04 and 2019-05
ESTIMATED LEAD TIME	Refer to Honeywell VSB
ESTIMATED MAN POWER	Refer to RILs 2018-04 and 2019-05

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The ECS improvement package consists in upgrading the ECUs (Environmental Control Unit):

- Modification of the temperature control loop with trim opening logic added, based on condenser outlet temperature in order to prevent turbine icing,
- Installation of an additional Spray nozzle to increase pack efficiency and heat exchanger performance,
- Modification of the water extractor to include a new temperature sensor.

For more details, refer to ATR RIL 2019-06 and Honeywell VSB 5768C-21-685.

BENEFITS

ECS reliability improvement.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kits supply
- Refer to Honeywell VSB 5768C-21-685

PRE-REQUISITE

Honeywell TIC valve & ACM upgrade

WEIGHT CHANGE

+ 0.9 kg (+ 2.0 lb)

SEE ALSO

Honeywell TIC valve & ACM upgrade

PRICE RANGE

Refer to RIL 2019-06

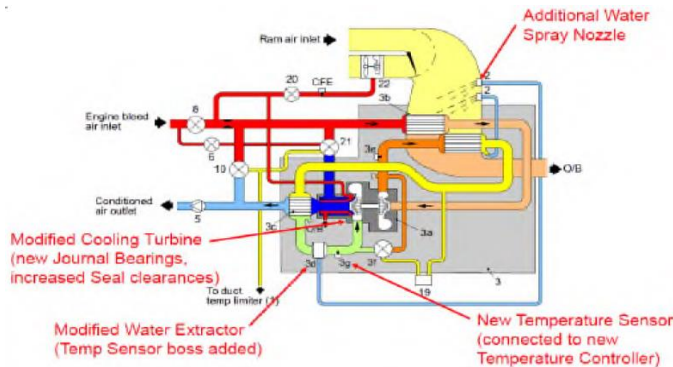
ESTIMATED LEAD TIME

4 months

ESTIMATED MAN POWER

44 hours

Subject to a possible specific adaptation to the relevant MSN.



Note:
Modification is only applicable on aircraft equipped with PW 127 engines. Modification of both ACM on same aircraft is part of ECS improvement kit embodiment.

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	N/A	Original	YES
ATR 72	-212 / -212A	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

ATA 21

AIR CONDITIONING

CABIN AIR FILTERING

HEPA FILTER

DESCRIPTION

Install High-Efficiency Particulate Air (HEPA) filters in the underfloor pressurized area.

HEPA filters consist of an hospital-grade air filtration system that captures more than 99.9% of any contaminated particles passing through and prevent them from re-entering the cabin.

The air in an ATR72 cabin and cockpit areas is completely refreshed about every 5 min. The direction of the airflow from ceiling to floor minimizes the movement of the air in forward and aft direction of the cabin. The air is then sucked to the underfloor area through opening slots at floor panel level.

HEPA filters located upstream the recirculation fans (after removing the mufflers) will capture with extraordinary efficiency particles in the size range of the COVID-19 and similar viruses.

Upon convenience, the customer can decide to let HEPA filters installed to provide an efficient filtration for recirculated air or can decide to operate aircraft with HEPA filters removed.



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kits and equipment supply

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	N/A	Original	NO
ATR 72	-212A	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

- Filter dust, bacteria and virus particles from the air circulating inside the cabin. Filtered, recirculated air provides cabin humidity adapted to optimize passenger comfort
- Ensure the continuous use of Recirculation Fans for an optimized air ventilation and temperature homogeneity on-board.
- Align with special EASA and ECDC recommendations in the frame of COVID-19 Aviation Health Safety Protocol.
- Follow international recommendations to consider HEPA filters in the Safety Management System (SMS)

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	✓	-	✓	-

PRE-REQUISITE	NONE
WEIGHT CHANGE	+ 7 Kg (+15 lb)
SEE ALSO	Hand sanitizer bottle holder
PRICE RANGE	From \$ 15,000
ESTIMATED LEAD TIME	4 months
ESTIMATED MAN POWER	70 hours

Subject to a possible specific adaptation to the relevant MSN.



ATA 23 COMMUNICATION

ATR
UPGRADE SOLUTION



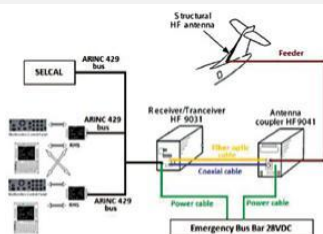
DESCRIPTION

Install a single HF 9000 COLLINS unit. This system allows voice communications in a 2 to 29.9999 MHz range providing a selection capability of 280 channels, spaced at 100 Hz increments. It is used for all long distance radio communications.

The installation of a dual HF 9000 Collins system is also possible to provide the use of both a primary and a complementary HF system.

To improve flight crew comfort during flight, it is recommended to complement HF9000 with a "SELCAL System".

NOTE: When the modification is installed, the rear cargo compartment volume is reduced by 0.15 m3 due to the installation of the HF equipment in rear upper area of the cargo compartment.



PACKAGE CONTENT

- SB validation & supply
- Update of operational and maintenance Documentation
- Kit supply
- Equipment supply (for HF installation): HF control panel, HF antenna coupler, HF coupler adapter kit, HF transceiver
- Equipment supply (for HF provision): HF transceiver mount, HF coupler mount
- NOFU (only for aircraft equipped with New Avionics Suite)

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-300/ -320/ -500	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Extended radio frequency range
- Improved immunity against electromagnetic interference from optional fiber links
- Mandatory for ETOPS operations; allows to operate new routes



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY



PRE-REQUISITE

NONE

WEIGHT CHANGE

+14.6 kg (+32.2 lb) for HF installation
+23 kg (+51.7 lb) for HF provision

SEE ALSO

- ➔ SELCAL system installation
- ➔ ETOPS 120' capability



PRICE RANGE

From \$ 140,000 (provision + installation + equipment)



ESTIMATED LEAD TIME

5 months



ESTIMATED MAN POWER

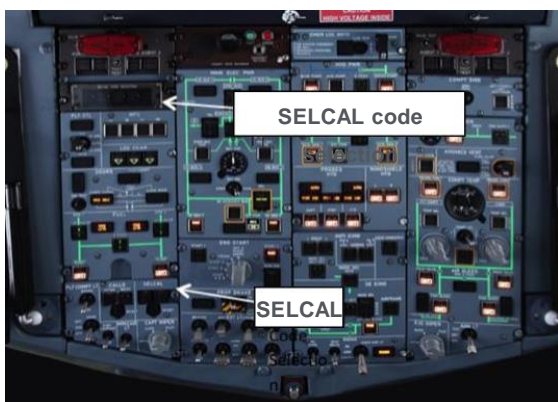
3 hours for HF installation
250 hours for HF provision

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install a selective calling system (SELCAL) to provide visual and aural indications of calls transmitted by ground stations and received by aircraft equipment (VHF or HF communications). The use of SELCAL allows an aircraft crew to be notified of incoming communications even when the aircraft radio has been muted.

The modification is applicable on aircraft equipped with VHF or/and HF systems.



PACKAGE CONTENT

- SB Validation & Supply
- Update of operational & maintenance documentation
- Kit supply
- Equipment supply: Selector code, selection panel & Decoder






APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-300/ -320/ -400/ -500	Legacy	YES	Original	N/A
		New Avionics Suite	YES	New Look	N/A
ATR 72	ALL			Armonia	N/A

BENEFITS

- Reduced workload for the pilot due to the alert system which eliminates the need for a continuous listening watch to be maintained on the assigned radio channels
- Reduced cockpit noise

 OPERATIONAL COSTS SAVINGS	 MAINTENANCE COSTS SAVINGS	 OPERATIONAL BOOST	 PASSENGER COMFORT	 CREW EFFICIENCY
-	-	-	-	✓

PRE-REQUISITE

VHF or/and HF systems.

WEIGHT CHANGE

+1.6 kg (+ 3.5 lb)

SEE ALSO

 Single COLLINS HF 9000 installation

PRICE RANGE

From \$ 55,000

ESTIMATED LEAD TIME

4 months

ESTIMATED MAN POWER

60 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install a Collins Aircraft Communication Addressing and Reporting System (ACARS), featuring a datalink recording interface capability, which allows data exchange between aircraft and flight operations centers or air traffic control by VHF communication.

Data are displayed on the second Multipurpose Control and Display Unit (MCDU) and can be printed (if the option is selected).

Uplink and downlink messages facilitate communication and transmission of information such as Position reporting, Terminal weather, Automatic Terminal Information Service (ATIS) reports, Pre-departure clearances, Delay reports, Emergency reports, Fuel status and any other type of information including free text messages.

The ACARS application is typically tailored in collaboration with the ACARS system supplier Rockwell Collins to meet each customer's specific needs in terms of type of messages exchanged.

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply
- Equipment supply (ACARS computer, Transmitter/Receiver, External Compensation Unit, VHF transceiver and antenna)

PRE-REQUISITE

- For non-NAS aircraft:
- Multipurpose Control and Display Unit (MCDU) with GNSS
 - GNSS HT1000 installation
 - Elementary surveillance (ELS)
- For NAS aircraft: NONE

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Allows constant communication access from flight operations centers (e.g. early preparation of maintenance tasks while the aircraft is still in-flight)
- Reduced workload thanks to the elimination of voice transmissions on routine information
- Faster and more accurate flow of information
- Reduced congestion on voice frequencies
- Transmission of passenger service information such as connection flights delays, terminal details, etc.



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT



CREW EFFICIENCY



WEIGHT CHANGE

+ 4.6 kg (+ 10.1 lb)

SEE ALSO

NONE



PRICE RANGE

From \$ 95,000 (New Avionics Suite)
From \$ 150,000 (Legacy)



ESTIMATED LEAD TIME

5 months



ESTIMATED MAN POWER

300 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install a third Audio Control Panel (ACP) on the pedestal for the observer and a third microphone; it interfaces with the Remote Control Audio Unit (RCAU) which enables the observer to:

- Select the transmission frequencies of HF or VHF transmitters, intercom systems and Passenger Address systems.
- Select and adjust the reception levels of HF or VHF transmitters, intercom systems or radio navigation receivers (MLS, VOR/ILS, DME, ADF, MKR).



NOTE: The modification is not compatible with the dual HF system installation (for non-NAS aircraft).

In aircraft not equipped with the modification, the observer communication are managed via the captain ACP.

This modification is mandatory in areas under FAA authority.

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Allows communication with the observer
- Allows redundancy in case of pilot ACP unavailability

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	-	-	✓

PACKAGE CONTENT

- SB validation & supply
- Update of maintenance documentation
- Kit supply
- Equipment supply (Audio control panel, Remote control audio unit, Hand microphone, Hand microphone jack panel)

PRE-REQUISITE	<ul style="list-style-type: none"> • 3 Channels RCAU • Flight deck observer boomset
WEIGHT CHANGE	+3 kg (+ 6.6 lb)
SEE ALSO	Bose boomsets installation
PRICE RANGE	From \$ 65,000
ESTIMATED LEAD TIME	4 months
ESTIMATED MAN POWER	50 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Replace existing Boomsets by BOSE A20 boomsets P/N 324843-2070. BOSE boomsets are equipped with Active Noise Reduction (ANR) function, and requires adapted jack panels (with electrical power supply) and a 3-station audio system. Boomset plug XLR-5 is needed to get the ANR capability.

The characteristics of BOSE A20 boomsets are:

- 30% greater active noise reduction
- Equalizing incoming signals for enhanced clarity and intelligibility
- Customizable audio priority
- Comfortable, stable fit with 30% less clamping force
- Certified to FAA TSO and E/TSO-C139a standards

The certification of the use of the jack panels with BOSE boomsets described here is included.



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply
- Bose boomsets not supplied by ATR (Buyer Furnished Equipment (BFE))

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Improved pilot performance by using Boomsets with Active Noise reduction system
- Retrofitting can be applied progressively to cover entire fleets so as to generate maintenance gains

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	✓	-	-	✓

PRE-REQUISITE

3rd Audio Control Panel (ACP)

WEIGHT CHANGE

From none to + 1.5 kg (+ 3.3 lb)

SEE ALSO

3rd Audio Control Panel (ACP)



PRICE RANGE

From \$ 1,000 (Sennheiser noise reduction Captain and FO boomsets replacement)

From \$ 22,000 (Team Captain and FO boomsets replacement including jack panels)



ESTIMATED LEAD TIME

3 months



ESTIMATED MAN POWER

- 1 hour for aircraft equipped with ANR
- 8 hours for other aircraft

Subject to a possible specific adaptation to the relevant MSN.

SSCVR WITH 90 DAYS ULB & 120 MIN. RECORDING DURATION

DESCRIPTION

Replace existing Cockpit Voice Recorders (CVR) by a new type, the Solid State Cockpit Voice Recorder (SSCVR) with 90 day Underwater Locator Beacon and 120 minute recording duration.

SSCVR is equipped with a Crash-Survivable Memory Unit (CSMU) for the protection of the solid state voice recording memory. This modification is mandatory in areas under EASA and FAA authority.



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Equipment supply (SSCVR)

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Low cost of ownership and simpler maintenance
- Higher recording capacity and higher reliability
- High recording quality
- Reduced weight
- Compliance with Local Regulatory Requirements



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

✓



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PRE-REQUISITE

NONE

WEIGHT CHANGE

From none to - 5.9 kg (- 13 lb) depending of current equipment installed.

SEE ALSO

- 🔗 SSFDR with 90 Days ULB
- 🔗 SSCVR with data link recording



PRICE RANGE

From \$ 21,000



ESTIMATED LEAD TIME

2 months



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Replace existing Cockpit Voice Recorders (CVR or SSCVR) by a new type, the SSCVR with ACARS data link recording. SSCVR utilizes a CSMU for the protection of the solid state voice recording memory and retains most recent 120 minutes information.

NOTE: This modification is mandatory in areas under FAA and EASA authority for aircraft issued with a Certificate of Airworthiness after January 1st 2016 and equipped with ACARS computer.



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Equipment supply (SSCVR)

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Low cost of ownership and simpler maintenance
- Higher reliability
- Higher recording capacity and higher quality
- Reduced weight
- Compliance with Local Regulatory Requirements



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PRE-REQUISITE

NONE

WEIGHT CHANGE

From none to - 5.9 kg (- 13 lb) depending of current equipment installed

SEE ALSO

- ↳ SSFDR with 90 Days ULB
- ↳ SSCVR with 90 Days ULB & 120 min. recording duration
- ↳ ACARS



PRICE RANGE

From \$ 25,000



ESTIMATED LEAD TIME

2 months



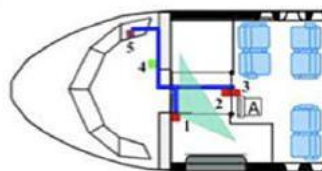
ESTIMATED MAN POWER

1 hour

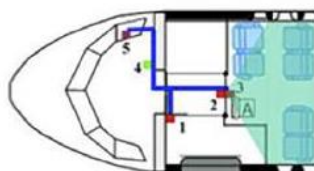
Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

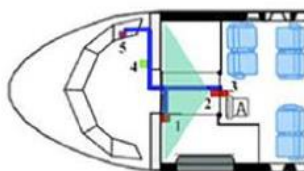
Install a video surveillance system including 3 cameras surveying cockpit entrance, cargo and passenger compartments. A LCD monitor installed in the cockpit is automatically activated by the call button of the cockpit door and can also be manually activated by the first officer.



Cargo compartment camera



Cabin camera



Cockpit door camera



Cockpit monitor

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply
- Equipment supply

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Compliance with ICAO and EU-OPS requirements
- Simplified crew members authentication procedure
- Improved monitoring of events in the passenger cabin leading to better assessments of required actions



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY



PRE-REQUISITE

Cockpit security door installation.

WEIGHT CHANGE

+5 kg (+ 11 lb)

SEE ALSO

NONE



PRICE RANGE

From \$ 20,000



ESTIMATED LEAD TIME

3 months



ESTIMATED MAN POWER

70 hours

Subject to a possible specific adaptation to the relevant MSN.

ATA 24 ELECTRICAL POWER

ATR
UPGRADE SOLUTION



DESCRIPTION

Change starter generators -121 or -123 by a new starter generator P/N 8260-124 with an extended brush life.

On the new starter generators, brush length has been increased from 38mm to 43mm and brush grade has been changed.

The new brush change interval is postponed to 1200fh, synchronized with bearing change interval. No intermediated check is needed.

See RIL Ref RIL-2017-07 for additional details.

NOTES:

The replacement of the starter generators involves an evolution of the fuel drain pipes, because of a design adjustment. Old and new generators are mixable, under constraint of the mechanical adaptation described here above.



PACKAGE CONTENT

For fuel drain pipe replacement only:

- SB validation & supply
- Update of technical publications
- Kit supply

For starter generators replacement:

- Equipment to be purchased as spare parts or upgraded through Thales Vendor Service Bulletin

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

- Time between overhaul extended from 2400FH to 3600FH
- Reduction of DC Gen Fault and consecutive operational burdens



OPERATIONAL
COSTS SAVINGS

-



MAINTENANCE
COSTS SAVINGS



OPERATIONAL
BOOST

-



PASSENGER
COMFORT

-



CREW
EFFICIENCY

-

PRE-REQUISITE

NONE

WEIGHT CHANGE

< 0.2 kg (0.45 lb) for fuel drain pipe replacement (on two engines) - 0.4 kg (- 0.9 lb) per equipment for starter generator replacement

SEE ALSO

NONE



PRICE RANGE

Refer to RIL-2017-07



ESTIMATED LEAD TIME

3 months



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

ATA 25 EQUIPMENT / FURNISHINGS

ATR
UPGRADE SOLUTION



ENHANCED CAPTAIN & FIRST OFFICER SEATS

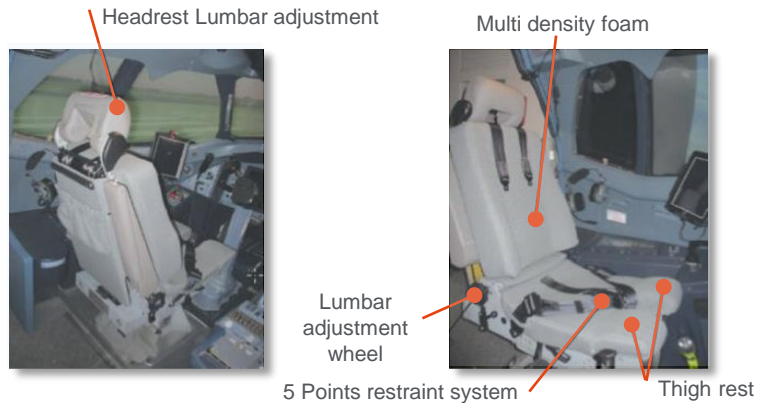
DESCRIPTION

Replace existing Captain and First Officer seats by new seats with enhanced comfort.

The comfort is enhanced thanks to :

- A headrest with rotation and vertical adjustment
- A lumbar adjustment system
- A thigh rest

NOTE : Customer may also benefit from advantages of new seat version including multi-density foam and five points restraint system.



BENEFITS

Enhanced Captain and First Officer comfort and cockpit seats ergonomics.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	-	-	✓

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply

PRE-REQUISITE	NONE
WEIGHT CHANGE	+ 4.5 kg (+ 8.7 lb)
SEE ALSO	NONE
PRICE RANGE	From \$ 3,000 without equipment
ESTIMATED LEAD TIME	4 months
ESTIMATED MAN POWER	1 hour

Subject to a possible specific adaptation to the relevant MSN.

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

DESCRIPTION

Install a supplementary Protective Breathing Equipment (PBE) for the observer in the cockpit behind the Captain's seat (LH side), bringing to 3 the number of PBE in the cockpit.

The PBE hood envelops the head of the wearer and provides oxygen with a demand based air regeneration system. The system is a chemical process that uses potassium superoxide (KO₂).



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

Equips the observer with oxygen equipment.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	-	-	✓

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications

PRE-REQUISITE	NONE
WEIGHT CHANGE	+ 2.5 kg (+ 5.5 lb)
SEE ALSO	3rd Audio Control Panel (ACP)
PRICE RANGE	From \$ 10,000 without equipment
ESTIMATED LEAD TIME	3 months
ESTIMATED MAN POWER	2 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Aircraft cabin configuration can be modified to accommodate specific customer choices and operational needs. From high density to comfort configuration, ATR can develop various solutions with different types of galleys (different size, wet or dry) and different types of storages. Cabin configuration is fully customizable from color choice, to general arrangement including possibility to be Head Injury Criterion (HIC) compliant.

Upon request, technical studies are undertaken to define which options will best fit customer requirements.








APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	NO
ATR 72	ALL	New Avionics Suite	N/A	New Look	NO
				Armonia	YES




BENEFITS

- Higher per-flight profits thanks to increased aircraft capacity
- Fleet commonality in terms of passenger capacity

				
OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
✓	-	-	✓	-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications

PRE-REQUISITE	NONE
WEIGHT CHANGE	Depending on the configuration
SEE ALSO	<ul style="list-style-type: none">  Galley modification  Rear cargo compartment Galley  GEVEN Neo Classic and Neo-Prestige seats
PRICE RANGE	On quote
ESTIMATED LEAD TIME	On quote
ESTIMATED MAN POWER	Depending on the configuration

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Replace existing passage seats with new Neo-Classic or Neo-Prestige Geven seats with outstanding features.

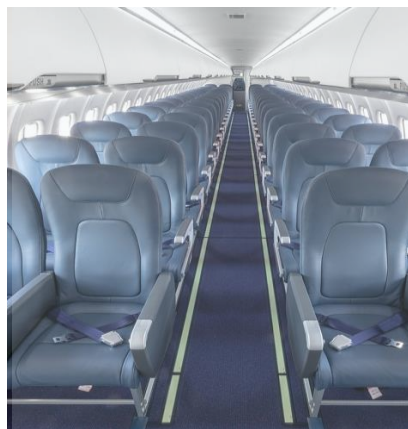
Geven Neo-Classic and Neo-Prestige seats are lightweight with carbon backrests and have a modern design specially developed for ATR cabins; their ergonomic shape improves passenger comfort and living space, especially at knee level.

Geven seats are optimized for high density configurations, enabling very low pitch.

Seat is designed to be simple, robust, reliable, and easy to maintain.

WEIGHT CHANGE

SEAT TYPE	NEO-CLASSIC	NEO-PRESTIGE
Standard seat	16 kg (35.2 lb)	21 kg (46.2 lb)
In Arm Table seat	21 kg (46.2 lb)	26 kg (57.2 lb)
Rear facing seat	26.5 kg (58.3 lb)	31.5 kg (69.3 lb)



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	NO
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

- High sitting comfort
- Modern appearance
- Improved living space
- About 2 pax saving with Neo-Classic seats and 1 pax saving with Neo-Prestige
- Fuel saving benefits and more environmental friendly.



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications

PRE-REQUISITE

NONE

SEE ALSO

Layout reconfiguration



PRICE RANGE

On quote



ESTIMATED LEAD TIME

On quote



ESTIMATED MAN POWER

Depending on the configuration

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Replace existing passenger seats with new Expliseat Titanium seats so as to considerably improve operational costs savings.

Expliseat Titanium seats are lightweight (5.5 kg (11 lb) and allow to save up to 300 kg (661.4 lb) when compared to the first ATR 600 series cabin configurations.

With this innovative design and the association of carbon fiber and titanium, seats allow passengers to travel comfortably and safely.

Furthermore these non reclining seats are fully customizable.

For fuller information please refer to « Cabin reconfiguration » modification.



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	NO
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

- Lightweight seats
- Fuel savings (less CO₂ per pax)
- Enhanced payload capacity
- Operational Flexibility on short runways or in hot and high environment
- Allow up to 78 pax configurations in ATR 72 aircraft
- Reduced maintenance costs with only 40 non corrosive materials
- Higher durability (compared to traditional aluminum seats)
- Fully customizable

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
✓	-	-	✓	-


PRE-REQUISITE

NONE

WEIGHT CHANGE

Up to - 300 kg (- 661.4 lb)

SEE ALSO

 GEVEN Neo Classic and Neo Prestige seats

PRICE RANGE

On quote

ESTIMATED LEAD TIME

On quote

ESTIMATED MAN POWER

Depending on the configuration

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

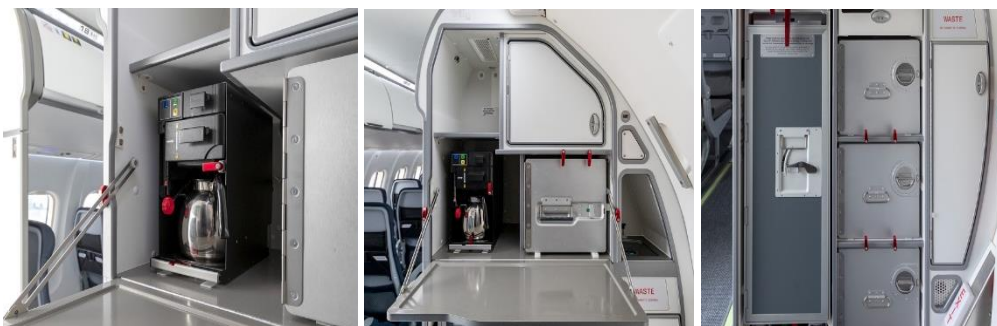
Various galley configurations can be fitted to accommodate specific customer needs. Galleys can be fitted with different drawer arrangements.

Wet or dry galleys, dimensions from 16" to 28", can be installed in the rear RH side part of the passenger cabin, and 16" width dry galley can be installed in the rear LH side part of the passenger cabin.

In addition to galleys, additional stowage compartment can be fitted under the overhead bins; please refer to the Additional stowage compartment solution.

In addition to standard units and half size trolleys, galleys are designed to accommodate various equipment and can be adapted to customer needs:

- Hot jugs
- Ovens
- Water heaters
- USB plugs (Smart galleys only)
- Coffee makers or Espresso machine
- Ice units








APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	YES
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES


BENEFITS

- Enhanced passenger service
- Enhanced flight crew performance: easier and faster service due to the customer standardizing galley configurations throughout the fleet

 OPERATIONAL COSTS SAVINGS	 MAINTENANCE COSTS SAVINGS	 OPERATIONAL BOOST	 PASSENGER COMFORT	 CREW EFFICIENCY
-	-	-	✓	✓

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications

PRE-REQUISITE	NONE
WEIGHT CHANGE	Variable
SEE ALSO	 Rear cargo compartment galley
PRICE RANGE	On quote
ESTIMATED LEAD TIME	On quote
ESTIMATED MAN POWER	Depending on the configuration

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The Standard Galley storage unit, is a dry galley installed in the front part of the rear cargo compartment.

This galley has housing capacity for two half-size trolleys and three standard units. Rear cargo compartment is reduced by 1.9 m³ when the galley equipment is in use during flights, and by 0.67 m³ when it is not.

A new solution, called Smart Galley F, is now available, installed at the same location as the Standard Galley storage unit.

Galley F is available in different versions:

- F1: single upper shelf (Total 2 S/U storage capacity) + 2 half size trolleys
- F2: dual upper shelf (Total 4 S/U storage capacity) + 2 half size trolleys

This galley is also fully foldable and rear cargo compartment is reduced by 0.06 m³ when the galley is folded and 1.9 m³ when in use during flights.



PRE-REQUISITE

NONE

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	YES
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

- Enhanced passenger service
- Enhanced flight crew performance



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT



CREW EFFICIENCY



PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit & equipment supply

WEIGHT CHANGE

- Standard Galley storage unit : **+ 30 kg (66 lb)** without equipment
- F1 Galley : **+ 7 kg (15.4 lb)** without any equipment
- F2 Galley : **+ 13 kg (+ 28.6 lb)** without any equipment

SEE ALSO

Galley modification



PRICE RANGE

From \$ 6,000



ESTIMATED LEAD TIME

From 4 months



ESTIMATED MAN POWER

50 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

ATR proposes additional stowage units fitted under the overhead bins and fastened on seat track in cabin. Stowage compartments are fully customizable: inside part can be equipped with various configurations depending on customer requests and needs, and outside part can be customized to fit with cabin harmony.

Stowage compartment can be installed equally in RH or LH part of the cabin and dimensions are comprised between 12" and 30". Stowage can be closed by doors or retaining net with removal transversal bar and curtain. It can be used as coatroom with shelves, converted in baggage stowage, used for life raft or accommodate 2 half size trolleys and 2 standard units.

Technical studies are undertaken to define which options will best fit customer requirements.

Stowage used as a baggage stowage



Stowage with net



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	YES
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

Increased cargo capacity for luggage, coats, etc.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

✓



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB Validation & Supply
- Update of technical publications

PRE-REQUISITE

NONE

WEIGHT CHANGE

Variable

SEE ALSO

- ✎ Galley modification
- ✎ Rear cargo compartment Galley
- ✎ Cargoflex containers
- ✎ Secured stowage



PRICE RANGE

On quote



ESTIMATED LEAD TIME

On quote



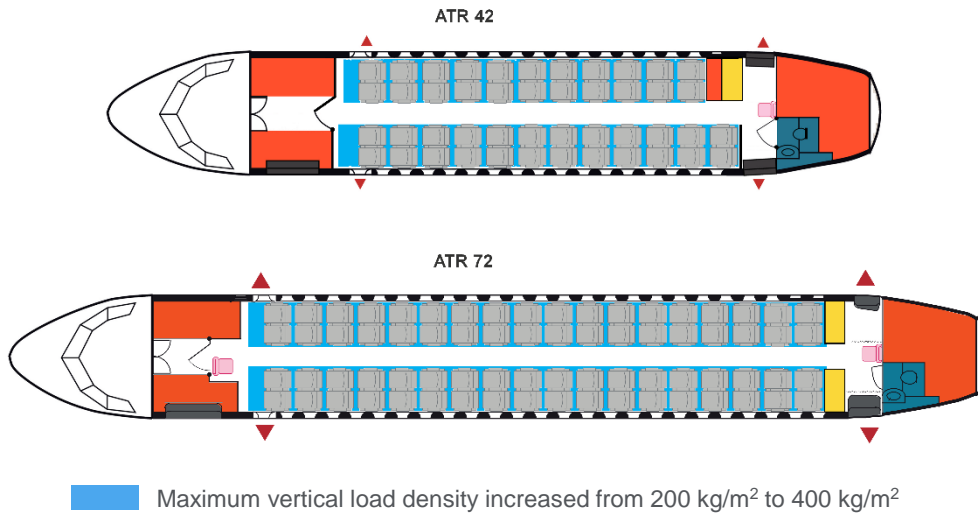
ESTIMATED MAN POWER

Depending on the configuration

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification increases the maximum vertical load density certified on the floor panels installed under the passenger seats from 200 kg/m² to 400 kg/m².



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	YES
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

- Floor resistance improved
- Allows embodiment of “Cargo Flex” modification
- Allows embodiment of versatile Cargo/Pax configuration

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation

PRE-REQUISITE	NONE
WEIGHT CHANGE	+ 9 kg (+ 19.8 lb) for ATR72
SEE ALSO	<ul style="list-style-type: none"> ↳ Cargoflex containers ↳ Versatile Cargo/Pax configuration
PRICE RANGE	From \$ 110,000
ESTIMATED LEAD TIME	4 months
ESTIMATED MAN POWER	100 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The cargo class E capability allows the aircraft to operate either in pax or cargo configuration.

The modification consist of the adaptation of the fire detection system and air conditioning system:

- Extension of the smoke detection system in the cabin and installation of shut-off valves on the air distribution system
- Installation of a handle on 80 VU
- Inhibition of detection fans in pax layout configuration

The configuration change from pax to cargo and vice versa is rapid and simple and can be achieved at any time, by using the aircraft maintenance documentation.

The SB does not install any loading system nor any kit of cargo containers (nets, pallets, containers, etc.) and must be completed with a non-STC holder change to secure the fret in the cargo area.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	NO
ATR 72	ALL	New Avionics Suite	YES	New Look	YES
				Armonia	YES

BENEFITS

Time efficiency on cabin modification between passenger and cargo configurations and vice versa.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Update of operational documentation
- Kit supply

PRE-REQUISITE

Cabin floor – Total floor reinforcement (400 kg/m²)

WEIGHT CHANGE

ATR72 : +25 kg (+55 lb)
ATR42 : +17 kg (+37 lb)

SEE ALSO

- Internal opening mechanism
- Cabin floor reinforcement (400 kg/m²)
- Cargoflex
- Floor to floor nets

PRICE RANGE

From \$ 140,000

ESTIMATED LEAD TIME

4 months

ESTIMATED MAN POWER

140 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install 2 or 4 "Class B" containers in the forward area of the ATR 42 or 72. Once provisions are installed, containers can be installed by removing specific seats in the forward area without impacting the rest of the cabin.

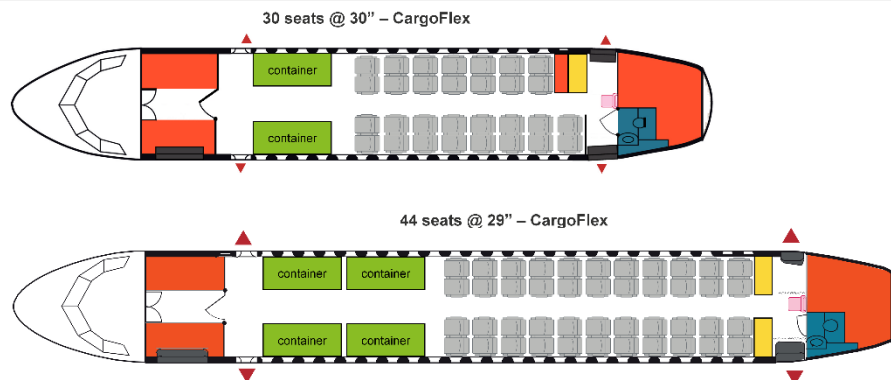
Each container has a separate smoke detector and a curtain with an integrated net ensuring isolation from smoke. An additional fire extinguisher is installed in the overhead bin, above one of the containers.

Containers are equipped with magazine pockets and handles to facilitate container transportation.

Containers (aft faces, placards, pockets) and curtains can be customized to customer wishes.

Container characteristics :

- Volume: 2.16 m³ (76.4 ft³)
- Weight: 64.4 kg
- Transportable mass: up to 450 kg (density 208 kg/m³)



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	N/A	Original	NO
ATR 72	-212A	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

Increase cargo capacity.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply
- Equipment supply: LH containers & RH containers

PRE-REQUISITE

- Floor panels at 400 kg/m²
- Large forward cargo bay with straight partition

WEIGHT CHANGE

+ 14 kg (+ 31 lb) for two "Class B" containers configuration

SEE ALSO

- 📄 Cabin floor reinforcement (400 kg/m²)
- 📄 Versatile Cargo/Pax configuration

PRICE RANGE

From \$ 250,000 for two "Class B" containers configuration

ESTIMATED LEAD TIME

10 months

ESTIMATED MAN POWER

100 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

With the BYOD (Bring Your Own Device) concept, airlines can use wireless IFE to broadcast personalized content to passengers' smartphone or tablet devices, as well as information and access to airline tools for cabin crews. Airlines can quickly and cost-effectively enable a complete BYOD service for passengers, with ancillary revenue, personalisation and passenger experience benefits.

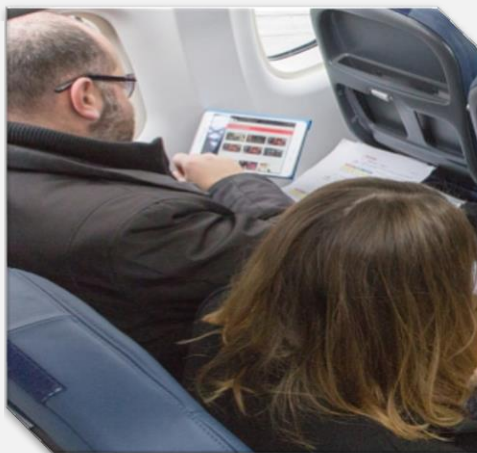
The use of T-PEDs on board the aircraft, either by crewmembers or by passengers presents a source of uncontrolled electromagnetic emissions with potential risk of adverse interference effects to aircraft systems.

To allow the use of T-PEDs within its aircraft, ATR demonstrates that the aircraft systems are compatible with the radio frequency emissions generated by the intentional and non-intentional transmissions of PEDs.

ATR solution allows gate-to-gate operation of the T-PEDs, i.e. including low visibility approach operation

Electromagnetic interferences (EMI) demonstration for the installation of electrical equipment that broadcast Wi-Fi to T-PEDs is out of the scope of this solution.

The T-PEDs usage in the cabin or by flight crew in the cockpit is limited to Wi-Fi (IEEE 802.11a/b/g/n/ac wireless standards 2,4GHz and 5GHz).



PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-400 -500 -600	Legacy	YES	Original	YES
ATR 72	ALL	New Avionics Suite	YES	New Look	YES
				Armonia	YES

BENEFITS

- Stream in-flight entertainment services direct to passengers' own devices allowed
- Cabin product differentiation by offering content streaming to passengers (movies, music, touristic information, news, inflight magazine, passenger surveys, etc.)
- Ease of content configuration and publishing
- Ease of flight deployment and retrieval
- Replaceable battery during turn-around time and rapid charging
- Ease of operation by cabin crew through cabin crew app
- Boost airline revenues



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT



CREW EFFICIENCY



PRE-REQUISITE

NONE

WEIGHT CHANGE

NONE

SEE ALSO

- Standalone WiFI IFE
- Aircraft powered Wi-Fi IFE



PRICE RANGE

From \$ 5,000



ESTIMATED LEAD TIME

5 weeks



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install a nursing table in the lavatory, associated to the related placard stickers.

Main features:

- Dimensions: 41 cm (depth) x 65 cm (width)
- Table upper face is 97 cm (38") above floor level
- Designed for children up to 11 kg

Nursing table folded



Nursing table unfolded

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	N/A	Original	NO
ATR 72	-212A	New Avionics Suite	N/A	New Look	NO
				Armonia	YES

BENEFITS

Improved passenger comfort and services

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	-	✓	-

PACKAGE CONTENT

- SB validation & supply
- Update of technical documentation

PRE-REQUISITE	NONE
WEIGHT CHANGE	+ 4 kg (+ 8.8 lb)
SEE ALSO	NONE
PRICE RANGE	From \$ 6,000
ESTIMATED LEAD TIME	3 months
ESTIMATED MAN POWER	15 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install a 3-frequency stand-alone portable Emergency Locator Transmitter (ELT) "ADT 406 S", located in the passenger cabin.

It uses the emergency frequency 406 MHz in order to be easily identified by COPAS-SARSAT satellites. It also transmits a 121.5 MHz and 243 MHz signal to facilitate the final approach of the distress scene.

This ELT can be triggered manually or automatically by means of a water sensor. It is compliant to the latest EU/OPS and ICAO recommendations.

The equipment can be installed in a doghouse or in an overhead bin, depending on the aircraft interior configuration.



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply
- Equipment supply: ELT & ELT bag

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	YES
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

- Compliance with the latest EU/OPS and ICAO recommendations
- Easy maintenance and installation
- Compact, lightweight and stand-alone
- No false activation induced by electromagnetic interferences (EMI)



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PRE-REQUISITE

NONE

WEIGHT CHANGE

+ 2 kg (+ 4.4 lb)

SEE ALSO

NONE



PRICE RANGE

From \$ 15,000



ESTIMATED LEAD TIME

3 months



ESTIMATED MAN POWER

2 hours

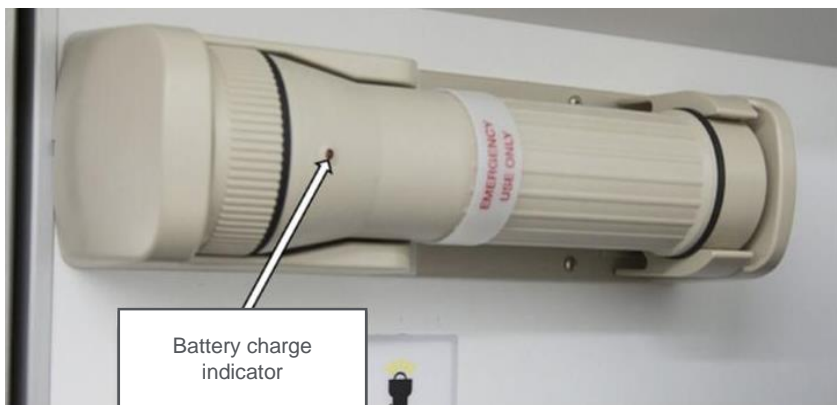
Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Replace the basic cabin flashlights by flashlights equipped with a battery charge indicator.

On each flashlight, an electronic maintenance circuit with LED indicator confirms that the equipment is always ready for use by monitoring battery voltage and continuity through the lamps.

Flashlight is automatically activated when removed from the retention bracket and deactivated when re-installed.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	YES
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

Time gain with maintenance check limited to visual control of the indicator.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply
- Equipment supply (except particular conditions agreed through commercial offer)

PRE-REQUISITE

NONE

WEIGHT CHANGE

NONE

SEE ALSO

NONE



PRICE RANGE

From \$ 8,000



ESTIMATED LEAD TIME

2 months



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in relocating the tail strut from the tail cone to the cabin. The tail strut is stored in a dedicated stowage, installed on the RH side of the rear attendant seat.

Example of installation on aircraft model 72-212A.



Closed position



Open position

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	N/A	Legacy	N/A	Original	YES
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

Enhanced flight crew performance: easier and faster access to the tail strut



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT



CREW EFFICIENCY



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply

PRE-REQUISITE

Compatible rear attendant seat. Specific analysis to be done for aircraft equipped with "Original" cabin.

WEIGHT CHANGE

NONE

SEE ALSO

NONE



PRICE RANGE

From \$ 8,000



ESTIMATED LEAD TIME

3 months



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install a modified rear left hand bulkhead that allows the loading of stretchers using the passenger door.

The central part is folded down during loading and unloading. Stretcher is installed in the last three left-hand rows of the ATR aircraft cabin.

The stretcher (BUCHER 16g NGS model) is not provided and must be purchased separately by the buyer. Stretcher installation should be installed with a STC (Supplemental Type Certificate) from BUCHER that has to be recognized for validation by local Airworthiness Authority.

NOTE: The LOPA must be compatible: please ask ATR for the compatibility with existing LOPA








APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-400/ -500	Legacy	N/A	Original	NO
		New Avionics Suite	N/A	New Look	YES
ATR 72	-102/ -202/ -212/ -212A			Armonia	YES

BENEFITS

Quick change for medical evacuation (MEDEVAC) operations.

 OPERATIONAL COSTS SAVINGS	 MAINTENANCE COSTS SAVINGS	 OPERATIONAL BOOST	 PASSENGER COMFORT	 CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply

PRE-REQUISITE

- No galley or stowage installed at the rear left-hand side of the cabin
- « Quick release option for breakover » on the last 3 LH pax seats
- May require seat pitch adjustment

WEIGHT CHANGE

+ 2.2 kg (+ 4.8 lb) for modified rear LH bulkhead

SEE ALSO

NONE

PRICE RANGE

From \$ 10,000

ESTIMATED LEAD TIME

4 months

ESTIMATED MAN POWER

20 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Accomplishment of this modification consists in installing a secured stowage in the forward cargo compartment on the left hand side. The stowage area is inaccessible during the flight. This stowage enables secured transport of special objects (weapons, highly-value items).

Two different stowage compartments are available; the characteristics of the stowage are:

Width (mm)	Depth (mm)	Height (mm)	Capacity
416	613	478	50 kg (100 lb)
515	360	500	70 kg (154 lb)



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	N/A	Original	NO
ATR 72	-212A	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

Secured transport of special object (ex.: weapon, highly-value items, etc.).



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kits supply
- Equipment supply: stowage compartment

PRE-REQUISITE

NONE

WEIGHT CHANGE

+ 15 Kg (+33 lb)

SEE ALSO

Secured aft cargo curtain



PRICE RANGE

From \$ 43,000 equipment included



ESTIMATED LEAD TIME

6 months



ESTIMATED MAN POWER

10 hours

Subject to a possible specific adaptation to the relevant MSN.






DESCRIPTION

During cargo loading and unloading phase customer can damage cargo area floor panels. Cargo floor surface degradation is mainly due to luggage impact during handling, wear and panel leading edge delamination due to action of pushing during handling.

This modification consists in protecting the existing cargo floor panels (in forward and/or rear cargo area) by a non-textile floor addition on upper surface.

BENEFITS

Floor panels protected against luggage impacts.

				
OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	✓	-	-	-

PACKAGE CONTENT

- SB validation & supply
- Update technical documentation
- Kit supply: Flat rail cover & Thresholds

PRE-REQUISITE

NONE

WEIGHT CHANGE

+ 8 kg (+ 17.6 lb) per cargo bay

SEE ALSO

 Cabin floor Reinforcement (kg/m²)

PRICE RANGE

From \$ 10,000 for forward cargo compartment

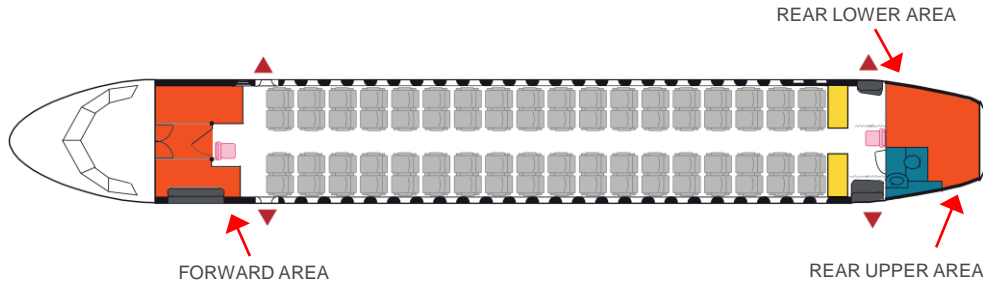
ESTIMATED LEAD TIME

4 months

ESTIMATED MAN POWER

10 hours

Subject to a possible specific adaptation to the relevant MSN.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	NO
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

DESCRIPTION

- Cargo-fire smoke-tightness
- Checked baggage inaccessibility
- Secured against hand passage, with the exception of the small upper and lower zones needed for rapid decompression reasons
- Robustness (in-line with standard curtain)
- Only 1 padlock needed to secure the curtain
- Opening & closing will require ~30 secs
- In-plane curtain
- Fixed section: small and flexible
- Curtain can be rolled up against the cabin attendant seat partition
- Lorry-style cable & hooks fasteners
- Repairable (component Maintenance Manual (CMM) provided post delivery)
- Easily and quickly retrofitable



Hiding / Protecting flap closed



Buckle closed, Padlock inserted



Curtain is closed and cable tensioned : A hand cannot go through. Even when applying force, the hand cannot enter until the level of thumb.

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

- Enhanced cargo security in baggage storage
- Compliance with Local Regulatory Requirements



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Equipment & Kits supply (optional)


PRE-REQUISITE

NONE

WEIGHT CHANGE

+ 1 kg (+ 2.119 lb)

SEE ALSO

 Secured Stowage



PRICE RANGE

From \$ 6,000



ESTIMATED LEAD TIME

4 months



ESTIMATED MAN POWER

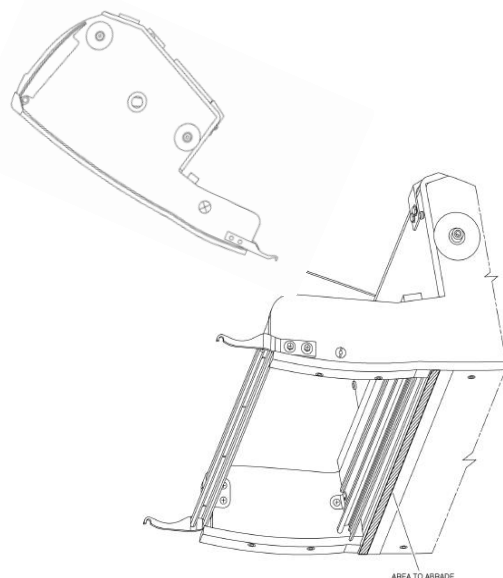
6 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

In order to enhance passenger comfort, ATR provides a technical solution to install air deflectors on the overhead stowage cabin.

The installation of air deflectors will direct airflows toward aircraft windows or side panels instead of passenger body.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	N/A	Original	NO
ATR 72	-212A	New Avionics Suite	N/A	New Look	NO
				Armonia	YES

BENEFITS

Enhanced passenger comfort & experience



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Kits supply
- Update of technical publications

PRE-REQUISITE

NONE

WEIGHT CHANGE

+ 3 Kg (+6.7Lb)

SEE ALSO

NONE



PRICE RANGE

From \$ 11.000 (4 deflectors)
From \$ 21.000 (full cabin)



ESTIMATED LEAD TIME

4 months



ESTIMATED MAN POWER

10 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install on the passenger entrance an interface plate that allow the installation of a hand sanitizer bottle holder and hygienic item (masks, gloves, wipes...) dispensers.

The interface plate is equipped with ferritic stainless steel inserts, allowing the bonding of holder and dispensers with magnetic strips.








APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	YES
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES




BENEFITS

- Easy sanitization of passengers and crew members hands when entering the aircraft or during flight.
- Fulfilling recommendations issued after sanitary crisis

 OPERATIONAL COSTS SAVINGS	 MAINTENANCE COSTS SAVINGS	 OPERATIONAL BOOST	 PASSENGER COMFORT	 CREW EFFICIENCY
-	-	-	✓	✓

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Equipment & Kits supply

PRE-REQUISITE	NONE
WEIGHT CHANGE	NONE
SEE ALSO	NONE
 PRICE RANGE	From \$ 3,000
 ESTIMATED LEAD TIME	On quote
 ESTIMATED MAN POWER	1 hour

Subject to a possible specific adaptation to the relevant MSN.

ATA 26

FIRE PROTECTION

ATR
UPGRADE SOLUTION



DESCRIPTION

Under European Commission regulation (EU) 2019/133, the use of halon fire extinguisher will be not allowed by 2020 due to environmental concern.

The modification consist in replacing the halon fire extinguisher installed in the lavatory by a new one containing environment friendly agent.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	YES
ATR 72	ALL	New Avionics Suite	N/A	New Look	YES
				Armonia	YES

BENEFITS

Compliance with local regulations.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Equipment supply

PRE-REQUISITE

NONE

WEIGHT CHANGE

NONE

SEE ALSO

Halon free fire extinguishers



PRICE RANGE

From \$ 600



ESTIMATED LEAD TIME

2 months



ESTIMATED MAN POWER

1 hour

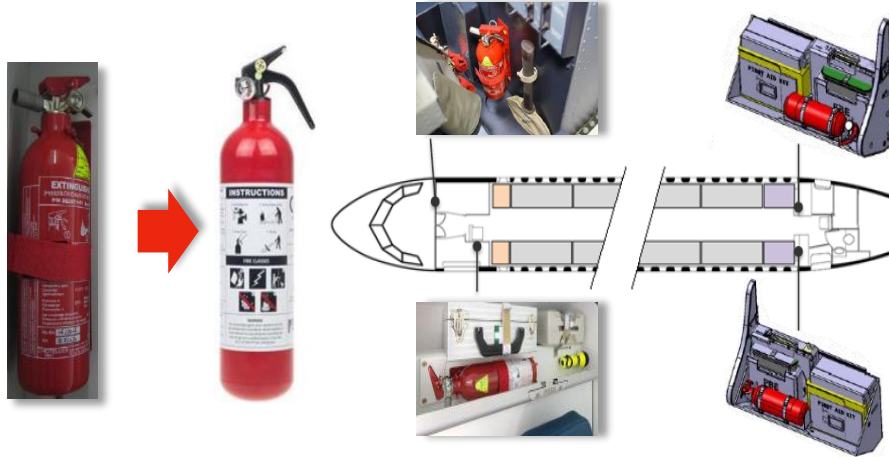
Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Under ICAO recommendations, the use of halon in aircraft fire extinguishing application will no longer be authorized by 2025 due to environmental concerns.

The modification consist in replacing the cabin halon fire extinguishers by portable P3 Hafex extinguishers.

NOTE: The upgrade needs a modification of diffusers and adaptors.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	NO
ATR 72	ALL	New Avionics Suite	N/A	New Look	NO
				Armonia	YES

BENEFITS

- ICAO recommendation
- Compliance with local regulations
- Environmentally friendly



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

✓



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Equipment supply

PRE-REQUISITE

NONE

WEIGHT CHANGE

NONE

SEE ALSO

- [Pre-Armonia cabins](#)
- [Lavatory halon free fire extinguisher](#)

PRICE RANGE

On quote

ESTIMATED LEAD TIME

Depending on the configuration

ESTIMATED MAN POWER

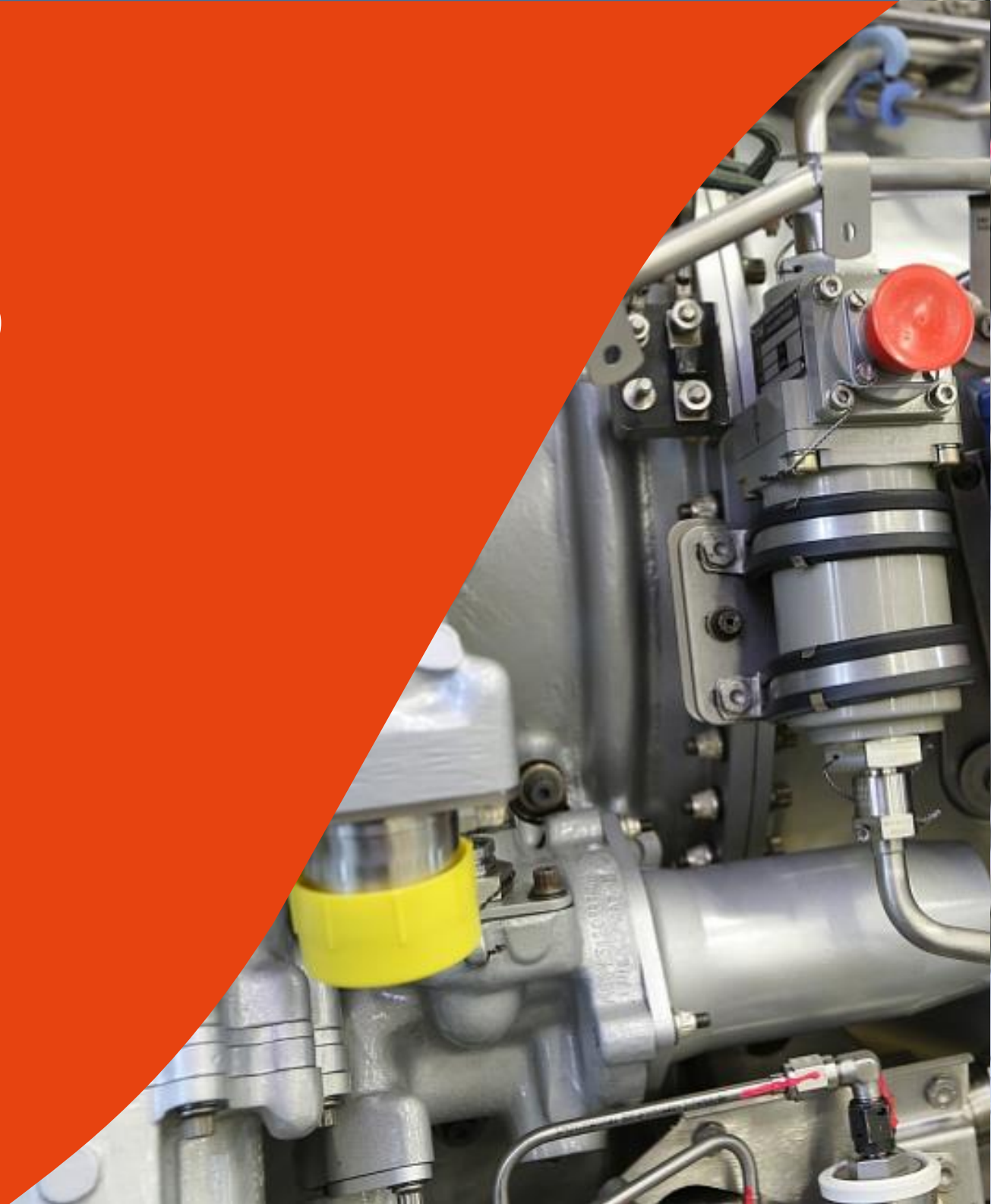
Depending on the configuration

Subject to a possible specific adaptation to the relevant MSN.

ATA 28

FUEL

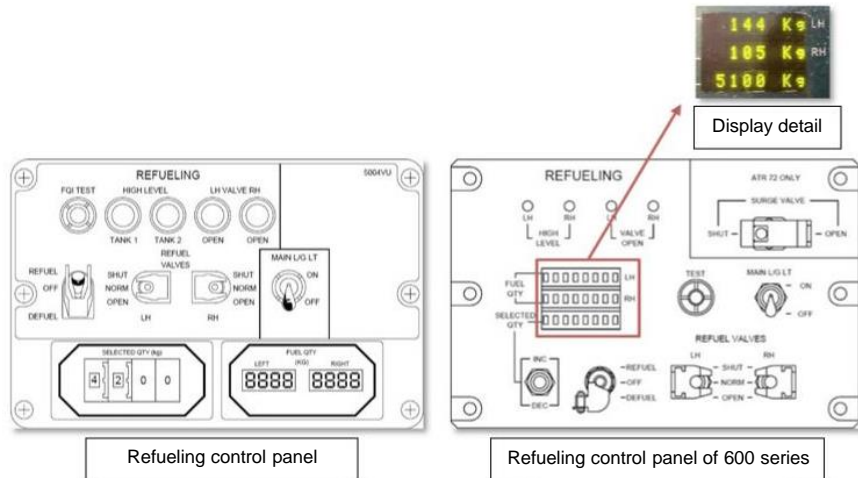
ATR
UPGRADE SOLUTION



DESCRIPTION

This modification allows the airline to use fuel indicating instruments with graduations units in accordance with its operational regulations: lb or kg.

This evolution only consists in replacing equipment on aircraft for all versions, except for the “-600 series” aircraft on which a simple pin-programming application only is required.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

Compliance with operational requirements.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Equipment supply (except for -600 series, pin-programming only)

PRE-REQUISITE

NONE

WEIGHT CHANGE

NONE

SEE ALSO

➔ Standby altimeter pressure units change



PRICE RANGE

From \$ 5,000 (no equipment)
From \$ 46,000 (with equipment)



ESTIMATED LEAD TIME

2 months



ESTIMATED MAN POWER

600 series A/C: 2 hours
Other A/C: 4 hours

Subject to a possible specific adaptation to the relevant MSN.

ATA 31 INDICATING & RECORDING SYSTEMS

ATR
UPGRADE SOLUTION



ATA 31

INDICATING /
RECORDING SYSTEM

DATA RECORDING SSFDR WITH 90 DAYS ULB

DESCRIPTION

In order to be compliant with regulatory requirements (FAA and EASA) this modification consists in replacing the existing Solid State Flight Data Recorder (SSFDR) with 30 day Underwater Locator Beacon (ULB) by a SSFDR with 90 day ULB

Equipment modification is done through the application of L3 Communication VSB N° FA 2100FDR SB024.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

Compliance with Local Regulatory Requirements.



OPERATIONAL
COSTS SAVINGS

-



MAINTENANCE
COSTS SAVINGS

-



OPERATIONAL
BOOST

-



PASSENGER
COMFORT

-



CREW
EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications


PRE-REQUISITE

SSFDR P/N 2100-4045-00 or higher

WEIGHT CHANGE

NONE

SEE ALSO

 SSCVR with 90 days ULB & 120 min. recording duration



PRICE RANGE

Free of Charge (Without equipment)



ESTIMATED LEAD TIME

NONE



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

ATR



DESCRIPTION

Activation of the Wireless Extension For ACMS (WEFA) function.

The WEFA system allows a wireless transmission (3G) of aircraft data (Quick Access Record, Digital ACMS Record, MPC reports, MCDU hard copies) stored on the ACMS (Aircraft Condition Monitoring System) to an airline server.

Data is recorded during flight and automatically transmitted when aircraft is on ground.

On aircraft not equipped with Multi-Purpose Computer (MPC) WEFA ready this option includes the MPC upgrade

BENEFITS

- Time gain thanks to automatic data download
- Anticipation of maintenance tasks
- Easy access to aircraft data for flight data monitoring activities



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply
- For GMA customer: PCMCIA card and MPC upgrade

PRE-REQUISITE

NONE

WEIGHT CHANGE

+ 0.18 kg (+ 0.4 lb)

SEE ALSO

Vibration Monitoring System (VMS)

PRICE RANGE

- From \$ 5,000 without equipment
- From \$ 26,000 with MPC upgrade and memory card

ESTIMATED LEAD TIME

3 months

ESTIMATED MAN POWER

7 hours

Subject to a possible specific adaptation to the relevant MSN.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

DESCRIPTION

Apply the Standard 3 New Avionics Suite software and benefit from improved features:

- Anticipated ILS & LPV capture
- Auto-Pilot domain extension
- High speed protection
- Low speed protection
- Temporary flight plan display on the navigation display (ND)
- Engine-Out Standard Instrument Departure (EOSID)

This new avionics standard also allows the embodiment of new options:

- RNP AR 0.3/0.3
- Integration of the clocks on the Display Units
- Synthetic Vision System (SVS)
- Electronic Checklist customization
- Company Routes

Loading of the Standard 3 software is only possible with Thales PMAT Software Suite standard V4.



PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Equipment supply (Software)

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Improvement of crew efficiency and comfort.
- Capability for implementation of new options allowing flight routes optimizations and operational costs savings
- Enables the Reactive Windshear (RWS) function

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
✓	-	-	-	✓

PRE-REQUISITE

- NAS Software standard 2.1
- MPC DMU software P/N L04451-1006 and FDAU software P/N L04450-1002

WEIGHT CHANGE

NONE

SEE ALSO

- ↻ RNP AR 0.3/0.3 Capability
- ↻ Software clocks on IAD
- ↻ Synthetic vision System
- ↻ Skylens™ Head Mounted Display
- ↻ Enhanced Vision System

PRICE RANGE

\$ 9.500

ESTIMATED LEAD TIME

6 weeks

ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

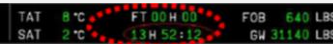
DESCRIPTION

Implement a software clock to replace the hardware clock.

Aircraft delivered with new avionics suite up to standard 2.2 are equipped with 2 hardware clocks displaying the UTC, Local Time, Chronometer and Elapsed Time. Flight Time is displayed on EWD.

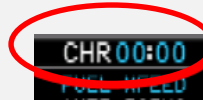
After hardware clock removal, UTC, Local Time, Chronometer, Elapse Time and Flight Time are displayed on the Multi Functional Displays.

UTC & Flight Time: displayed on EWD permanent data



Local Time: On MCDU Unit Page, the crew enters a delta/UTC

Chronometer: is available on VCP (if displayed, else on PFD)



Elapsed Time: is displayed on MCDU

Countdown: is displayed on MCDU



The Hardware clocks are removed on aircraft fitted with NAS Standard 3 prior delivery.

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	N/A	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Fleet harmonisation
- Weight saving
- User friendly



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY



PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Update of NAS option configuration file

PRE-REQUISITE

- NAS Standard 3 minimum

WEIGHT CHANGE

- 1.6 kg (-3.5 lb)

SEE ALSO

Enhanced NAS software Standard 3

PRICE RANGE

On quote

ESTIMATED LEAD TIME

3 months

ESTIMATED MAN POWER

20 hours

Subject to a possible specific adaptation to the relevant MSN.

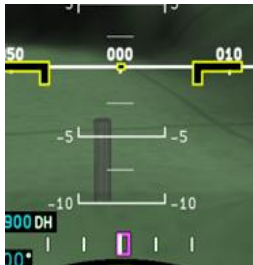
DESCRIPTION

Synthesis Vision System (SVS) represents a 3D pilot centric view of the external environment, including terrains, obstacles, landing areas and large cities displayed to pilots on their respective Primary Flight Displays (PFD).

The Head-Down Synthetic Vision System uses databases, aircraft position, and altitude to compute and generate the 3D scene.



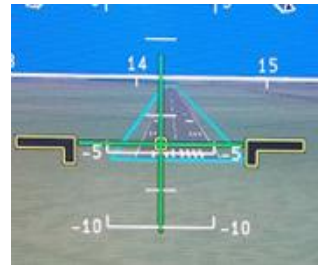
Flight Path Vector



Obstacles



Towns



Runways marking

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Update of NAS option configuration file

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy	NO	Original	N/A
ATR 72	72-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Increased pilot situational awareness
- Reduced workload (in cloud, night, hilly areas) and better visual patterns, (difficult airport or if unaccustomed to the latter)
- Savings in costs by improving approach stabilization
- Displays major obstacles (Height > 200 ft above ground level)



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT



CREW EFFICIENCY



PRE-REQUISITE

NAS standard 3 or upper standard

WEIGHT CHANGE

NONE

SEE ALSO

- ➔ Enhanced NAS software Standard 3
- ➔ Enhanced vision system (EVS)



PRICE RANGE

On quote



ESTIMATED LEAD TIME

6 weeks



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

ATA 32 LANDING GEAR

ATR
UPGRADE SOLUTION



DESCRIPTION

Replace landing gear wheels and/or brakes. Depending on customer needs (extreme cold conditions for example) and preferences, wheels and brakes from different manufacturers can be installed.

- MEGGITT
- GOODRICH (ATR 42)
- SAFRAN LANDING SYSTEM
- MICHELIN (Nose wheel)

MIXABILITY: Main wheels and brakes of different manufacturers might not be mixable. However, it is possible to have the main landing gear and the nose landing gear equipped with parts from different manufacturers.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

Optimized maintenance, provisioning, logistics and inventory costs due to fleet commonality and single-type spares.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	✓	-	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Equipment supply

PRE-REQUISITE	NONE
WEIGHT CHANGE	From - 8 kg to + 8 kg (+ 17.6 lb)
SEE ALSO	Extension to -45°C
PRICE RANGE	From 500 USD equipment not included
ESTIMATED LEAD TIME	2 months
ESTIMATED MAN POWER	4 hours per landing gear

Subject to a possible specific adaptation to the relevant MSN.

ATA 33 LIGHTS

ATR
UPGRADE SOLUTION



DESCRIPTION

Modify the anti-collision lights installation from white to red or red to white. This color change is applicable both on aircraft equipped with halogen or LED lights.

NOTE: A dedicated study must be carried out for oldest aircraft, to confirm the applicability and the possible way of retrofit.

BENEFITS

Compliance with local authorities regulations



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply (for halogen system only)
- Equipment supply

PRE-REQUISITE

Specific study should be carried through for oldest aircraft to determine if additional Service Bulletins have to be applied.

WEIGHT CHANGE

Halogen System

- White to Red (+ 1.4 kg (+ 3 lb))
- Red to White : None

LED system : None

SEE ALSO

- 🔗 Lights powered by battery on ground
- 🔗 LED installation

PRICE RANGE

From \$ 7,000

ESTIMATED LEAD TIME

3 months

ESTIMATED MAN POWER

From 4 hours to 60 hours

Subject to a possible specific adaptation to the relevant MSN.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

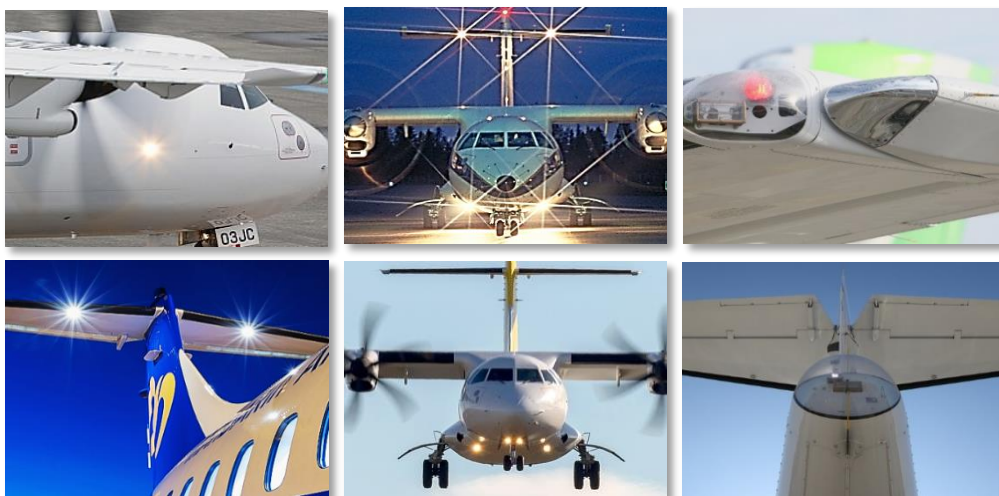
AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

DESCRIPTION

Replace current halogen lights to LED, the lights concerned are:

- Anti-collision lights
- Navigation lights
- Strobe lights
- Logo lights
- Taxi and Take-off lights
- Wings and Engine scan lights

New equipment is not interchangeable with the old one, and partial installation is not allowed as new LED lights are not mixable with the halogen one: embodiment of this modification implies the replacement as a set of all the lights related to the same function.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

- Long life span
- Reduced maintenance costs
- Low power consumption
- 100% recyclable
- Improved reliability



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT



CREW EFFICIENCY



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply
- Equipment supply

PRE-REQUISITE

NONE

WEIGHT CHANGE

From -1.6 kg (-3.5 lb)

SEE ALSO

- External lights powered by battery
- Anti-collision lights color change



PRICE RANGE

From \$ 3,000



ESTIMATED LEAD TIME

3 months



ESTIMATED MAN POWER

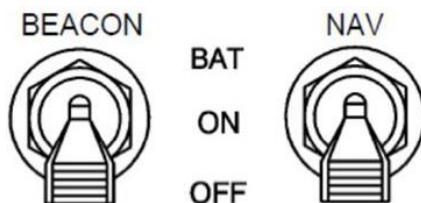
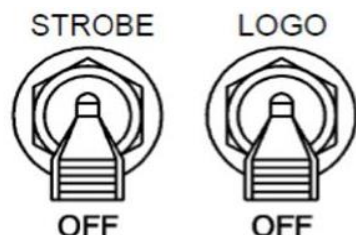
Depending on the configuration

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Power the anti-collision and navigation lights on batteries when aircraft is on ground.

This functionality can be used when engines are not running and external power is not available (e.g. during a/c towing).



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

- Answer to particular airport regulations that may require to turn-on the navigation lights and/or the anti-collision lights for towing aircraft in night conditions.
- No need to use the “hotel” mode: improvement of the noise, environmental and manpower aspects.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
✓	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply

PRE-REQUISITE	Aircraft equipped with LED anti-collision and navigation lights.
WEIGHT CHANGE	+ 0.6 kg (+ 1.246 lb)
SEE ALSO	<ul style="list-style-type: none"> ↳ LED installation ↳ Anti-collision lights color change
PRICE RANGE	From \$ 11,000
ESTIMATED LEAD TIME	3 months
ESTIMATED MAN POWER	50 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Replace the halogen emergency lighting system by LED lighting system.

Impacted lights are:

- Front emergency exits lights
- Aft door tops lights
- Front and aft partition lights
- Front and aft exits down door lights
- Aisle ceiling emergency lights
- Exterior fuselage flood lights
- Exterior stairs flood light

In addition, the emergency covers are now fitted with pictograms, in replacement of the English or English/Local language indications.

NOTE : For aircraft exploited under FAA regulations, specific pictograms can be installed.

BENEFITS

- Long life span
- Reduced maintenance costs
- Low power consumption
- Universality of the pictograms (no need to replace the covers at transfer aircraft)



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



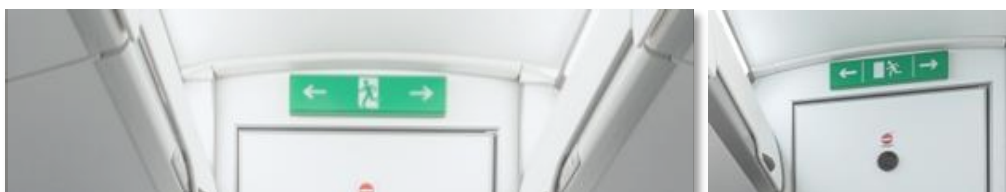
PASSENGER COMFORT

-



CREW EFFICIENCY

-



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply
- Equipment supply

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	N/A	Original	NO
ATR 72	-212A	New Avionics Suite	N/A	New Look	NO
				Armonia	YES

PRE-REQUISITE

Armonia cabin

WEIGHT CHANGE

NONE

SEE ALSO

[Placards and markings replacement](#)



PRICE RANGE

From \$ 20,000



ESTIMATED LEAD TIME

3 months



ESTIMATED MAN POWER

24 hours

Subject to a possible specific adaptation to the relevant MSN.

ATA 34 NAVIGATION

ATR
UPGRADE SOLUTION



DESCRIPTION

Install second COLLINS Automatic Direction Finder (ADF) navigation system to improve navigation capability.

For Legacy avionics aircraft:

The ADF is a radio compass system providing the bearing of a selected NDB (Non Directional Beacon).

ADF information is displayed on the RMIs (Radio Magnetic Indicator) and EHSIs (Electronic Horizontal Situation Indicator) for both ADF receivers.

For New Avionics Suite aircraft:

The ADF is an airborne automatic radio compass providing the bearing of the selected NDB (Non Directional Beacon).

ADF bearing pointer symbols and reminders are displayed on both PFD compass (HIS) and Navigation Display. Green is the color associated to the ADF indications (white is for the VOR indications) for both ADF.



PACKAGE CONTENT

- SB validation & supply
- Update of operational and maintenance documentation
- Kit supply
- Equipment supply: ADF2 antenna, ADF2 receiver, ADF control unit

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Backup System
- Improve navigation capability
- Extended operational envelope: operations in smaller airports equipped with conventional navigational aid only



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PRE-REQUISITE

Depending on aircraft configuration

WEIGHT CHANGE

+ 4 kg (+ 8.8 lb)

SEE ALSO

NONE



PRICE RANGE

From \$ 35,000 with equipment



ESTIMATED LEAD TIME

4 months



ESTIMATED MAN POWER

Legacy Avionics: 280 hours
New Avionics Suite: 70 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install a second radio altimeter (RA2) system. The radio altimeter determines the height of the aircraft above the terrain. In normal configuration (when both Radio Altimeters data are valid), Radio Height sent by Radio Altimeter 1 is displayed on the Captain's side and Radio Height sent by radio Altimeter 2 is displayed on the First Officer's side.

The second radio altimeter is also a pre-requisite for Clearvision system installation.

BENEFITS

- Backup System
- Compliance with local regulatory requirement



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of operational and maintenance documentation
- Kit supply
- Equipment supply : 2 RA2 antennas, RA2 receiver

PRE-REQUISITE

NONE

WEIGHT CHANGE

+ 4.9 kg (+ 10.8 lb)

SEE ALSO

NONE



PRICE RANGE

From \$ 60,000



ESTIMATED LEAD TIME

5 months



ESTIMATED MAN POWER

40 hours

Subject to a possible specific adaptation to the relevant MSN.



Radio altitude

Decision height

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

DESCRIPTION

Replace the current standby altimeter by a new one graduated either in millibars or in inches of mercury, depending on customer operational requirements.

NOTE: On Aircraft equipped with New Avionics Suite the function is integrated in the IESI (Integrated Electronic Standby Equipment). The standby altimeter as stand-alone equipment is not installed



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

- Compliance with operational requirements
- Turn back to fleet commonality for second hand aircrafts and lessor aircraft



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Equipment supply

PRE-REQUISITE

NONE

WEIGHT CHANGE

NONE

SEE ALSO

Fuel quantity units (Imperial/Metric)



PRICE RANGE

From \$ 12,000



ESTIMATED LEAD TIME

5 weeks



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Allow operations on airports surrounded by high obstacles (mountain airports or downtown airports).

Use special vertical guidance laws for the autopilot and avoid unjustified “sink rate” warnings (Mode 1 Alert) during approaches in steep slope conditions (Approach slope between 4.5° and 6° in normal conditions).

A dedicated pushbutton installed in the flight compartment controls the launching of the guidance laws.



NOTE: The capability provided by the application of this retrofit solution does not constitute approval to conduct steep approach operation. The operator must obtain such authorization from the appropriate authorities.

For ATR “42-600” only, the option allows to get a landing performance credit. Refer to the AFM for Limitations and Procedures.

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

Operations extended to landlocked airports. No need to use dedicated aircraft to serve certain air routes.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply
- From NAS A/C: Equipment supply

PRE-REQUISITE

Aircraft equipped with MKVII EGPWS minimum

WEIGHT CHANGE

< 1kg (2,2 lb)

SEE ALSO

Take-off at RTO (100% power)

PRICE RANGE

NAS A/C: from \$ 50,000
Legacy A/C: from \$ 10,000

ESTIMATED LEAD TIME

3 months

ESTIMATED MAN POWER

15 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Replace weather radar PRIMUS 800 with radar PRIMUS 660 type.

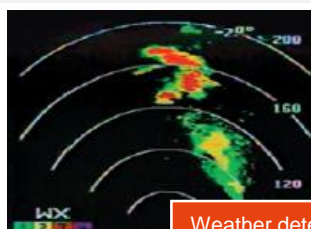
This new radar offers superior weather detection thanks to :

- Long-range and high definition ground mapping,
- Rain Echo Attenuation Compensation Technique (REACT),
- 120/60 degree scan,
- 18-inch flat plate antenna

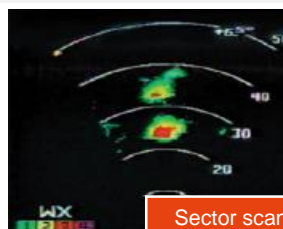
New outstanding proposed options are :

- Ground Mapping (GMAP),
- Target Alert (TGT),
- Advanced BITE (Built-In Test Equipment) and text faults

The installation of this new radar doesn't require any additional indicator in the cockpit. Weather information is displayed on the aircraft navigation displays (Electronic Horizontal Situation Indicator - EHSI).



Weather detection



Sector scan

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply
- Equipment supply

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	Standard	New Look	N/A
				Armonia	N/A

BENEFITS

- Improved decision making due to better performance of radar system
- Higher reliability
- Simpler maintenance thanks to BITE (Built-In Test Equipment)
- Operational gains
- Space and weight savings



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT



CREW EFFICIENCY



PRE-REQUISITE

NONE

WEIGHT CHANGE

-6 kg (-13 lb)

SEE ALSO

NONE



PRICE RANGE

From \$ 80,000



ESTIMATED LEAD TIME

3 months



ESTIMATED MAN POWER

40 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Validate the aircraft configuration to enable ETOPS operations.

ETOPS (Extended Range Twin Engine Operations) are flights conducted over a route towards airport adequate for emergency landing distant further than one hour flying time at the approved one-engine-inoperative cruise speed (under standard conditions in still air) from an adequate airport.

The accomplishment of this modification requires previous or simultaneous embodiment of engine and aircraft modifications listed in ETOPS Configurations Maintenance and Procedure standards (CMP) document. For fuller information, please refer to ETOPS CMP document available on ATRactive.

NOTE: This modification provides the customer with a pre-requisite for local Certification Authority approval, and with additional procedures, limitations and performance charts in the Airplane Flight Manual.








APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Extended operational envelope
- Operations on new routes
- Operations on more direct routes

 OPERATIONAL COSTS SAVINGS	 MAINTENANCE COSTS SAVINGS	 OPERATIONAL BOOST	 PASSENGER COMFORT	 CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation

PRE-REQUISITE

Refer to ETOPS CMP document available on the ATRactive portal

WEIGHT CHANGE

NONE

SEE ALSO

 Single COLLINS HF 9000 installation

PRICE RANGE

From \$ 5,000

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install a Terrain and Traffic Collision Avoidance System (T²CAS) version 7.1.

T²CAS computer combines both :

- TAWS (Terrain Awareness Warning System)
- TCAS (Traffic alert and Collision Avoidance System) functions into a single unit

The result is space, weight and power consumption savings, and reinforced situational awareness through greater conflict anticipation and an efficient generation of alarms.



TAWS + TCAS

PACKAGE CONTENT

- SB validation & supply
- Update of operational and maintenance documentation
- Equipment supply
- Equipment supply : Directional T²CAS antenna, Omni T²CAS antenna, T²CAS transmitter receiver, Aircraft Personality Module (APM), Compact flash card and associated ASDB and ACD software.

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	YES	Original	N/A
ATR 72	-212A	New Avionics Suite	Standard	New Look	N/A
				Armonia	N/A

BENEFITS

- Reinforced situational awareness through greater conflict anticipation and a systematically efficient generation of alarms
- Space, weight and power consumption savings compared to using a double LRU system
- Lower maintenance actions compared to using TCAS and TAWS individual computers



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY



PRE-REQUISITE

HT1000 GNSS

WEIGHT CHANGE

- 3.3 kg (- 7.3 lb)

SEE ALSO

- T³CAS installation
- SINGLE HT1000 GNSS Installation



PRICE RANGE

From \$ 265,000 with equipment



ESTIMATED LEAD TIME

5 months



ESTIMATED MAN POWER

120 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The T³CAS is a unique integrated surveillance equipment that features in one single 4MCU size unit a **Traffic Collision Avoidance System (TCAS)**, a **Terrain Avoidance Warning System (TAWS)** and a Mode S transponder.

The TCAS function is delivered with the latest standard Change 7.1. mandatory in Europe.



PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Equipment supply

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Enabler for the Reactive Windshear (RWS) function
- Weight (1 ATC transponder and 2 antennas removal), space and power consumption reduction (about -50W).
- DMC reduction thanks to the removal of 1 ATC transponder
- Mode S transponder software is easily upgradeable to DO-260B



OPERATIONAL
COSTS SAVINGS

-



MAINTENANCE
COSTS SAVINGS



OPERATIONAL
BOOST

-



PASSENGER
COMFORT

-



CREW
EFFICIENCY

-

PRE-REQUISITE

NONE

WEIGHT CHANGE

- 5 kg (- 11 lb)

SEE ALSO

- Enhanced NAS Software – Standard 3
- ADS-B Out DO-260B activation in T³CAS
- Additional callout activation in T³CAS
- Reactive windshear activation(RWS)



PRICE RANGE

From 150k\$ for aircraft already equipped with NXT-600 ATC transponder.



ESTIMATED LEAD TIME

6 months



ESTIMATED MAN POWER

Depending on the configuration

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Broadcast aircraft data to other aircraft and to ATC centers, even where there is no ATM radar coverage available.

The function ADS-B OUT embedded on the T³CAS configuration complies with RTCA DO-260B.

The solution consist in activating ADS-B OUT DO-260B in T³CAS.

BENEFITS

- Compliance with EASA and FAA 2020 mandate
- Increased operational efficiency through aircraft tracking
- Access to shorter approaches inducing time and fuel savings



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY



PACKAGE CONTENT

- SB Validation & Supply
- Update of operational & maintenance documentation

PRE-REQUISITE

T³CAS configuration

WEIGHT CHANGE

NONE

SEE ALSO

- ➔ ADS-B OUT DO 260-B (NAS)
- ➔ T³CAS installation



PRICE RANGE

From \$ 80,000



ESTIMATED LEAD TIME

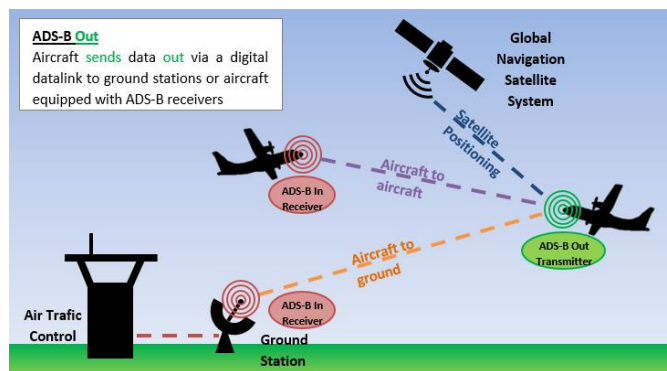
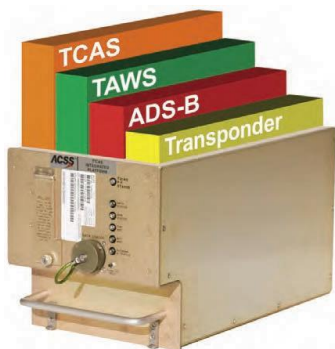
2 months



ESTIMATED MAN POWER

2 hours

Subject to a possible specific adaptation to the relevant MSN.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

DESCRIPTION

Altitude callout are generated by T³CAS to provide altitude situation warnings.

Four new additional altitude callout have been introduced in last T³CAS computer such as, 300 ft., 400 ft., 1000 ft. and 2500 ft. callout warning.

The solution consist in activating one or several additional altitude callout in T³CAS.

ALTITUDE CALL OUT TABLE

Callout	Aural	Activation
2 500 ft.	Twenty five hundred	Option
1 000 ft.	One thousand	Option
500 ft.	Five hundred	Standard
400 ft.	Four hundred	Option
300 ft.	Three hundred	Option
200 ft.	Two hundred	Standard
100 ft.	One hundred	Standard
50 ft.	Fifty	Standard
40 ft.	Forty	Standard
30 ft.	Thirty	Standard
20 ft.	Twenty	Standard
10 ft.	Ten	Standard

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Improve altitude awareness
- Provide a better understanding of aircraft position in difficult areas



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY



PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation

PRE-REQUISITE

T³CAS configuration

WEIGHT CHANGE

NONE

SEE ALSO

- ➔ Second Radio Altimeter
- ➔ T³CAS installation



PRICE RANGE

From \$ 20,000



ESTIMATED LEAD TIME

2 months



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Reactive Windshear (RWS) warning detects and provides the flight crew with an early warning of Windshear activities.

This function is embedded on T³CAS computer on deactivated mode which has to be re-configured with necessary connections in order to activate the function.

The solution consist in activating RWS function on T³CAS configuration.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	NO	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Enhanced operational safety
- Activated and deactivated via an option



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation

PRE-REQUISITE

- Standard 3 New Avionics Suite software
- T³CAS configuration

WEIGHT CHANGE

T³CAS installation

SEE ALSO

NONE



PRICE RANGE

From \$ 20,000



ESTIMATED LEAD TIME

2 months



ESTIMATED MAN POWER

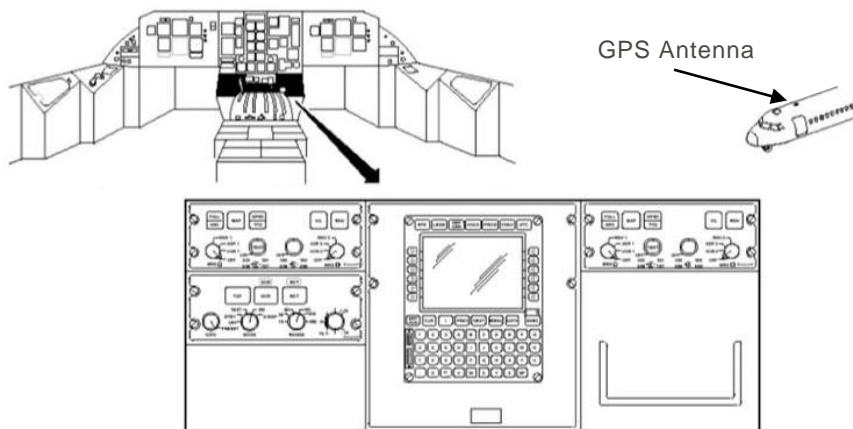
2 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install a Honeywell TRIMBLE HT1000 GNSS system coupled to the Auto-pilot and Electronic Flight Instrument System (EFIS). The GNSS HT1000 system is uploaded with the latest software certified for Precision-Area Navigation (P-RNAV) and Required Navigation Performance (RNP APCH) operations.

The HT 1000 can be installed in a dual configuration with automatic data synchronization.



PACKAGE CONTENT

- SB Validation & Supply
- Kit Supply
- Update of operational and maintenance documentation

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-300/ -320/ -400/ -500	Legacy	YES	Original	N/A
		New Avionics Suite	NO	New Look	N/A
ATR 72	ALL			Armonia	N/A

BENEFITS

- More direct and better locations for holding patterns due to P-RNAV and RNP
- APCH capabilities.
- Please refer to “P-RNAV with GNSS” and “RNP APPROACH with GNSS”
- modifications for more information.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
✓	-	-	-	-

PRE-REQUISITE

Depending on the aircraft configuration

WEIGHT CHANGE

+ 6.8 kg (+ 15.1 lb)

SEE ALSO

- RNP approach with GNSS
- T³CAS installation
- P-RNAV with GNSS

PRICE RANGE

From \$ 60,000 without equipment

ESTIMATED LEAD TIME

4 months

ESTIMATED MAN POWER

7 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Create conformity between GNSS and EASA AMC 20-16 requirements.

P-RNAV equipment automatically determines aircraft desired flight path by a series of way points held in a database. It enables to define routes in the terminal airspace which meet the needs of the aircraft operators and the air navigation services provider.

This often means shorter, more direct routes with simple connections to the en-route structure.

P-RNAV requires aircraft conformance to a track-keeping accuracy of +/- 1NM for at least 95% of flight time, together with advanced functionality and high integrity navigation databases.

BENEFITS

- Compliance with European requirements
- More direct routes with reductions in flight distances and fuel consumption
- More dual or parallel routes available to accommodate a greater flow of traffic
- Better locations for holding patterns



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of operational publications

PRE-REQUISITE

GNSS HT1000

WEIGHT CHANGE

NONE

SEE ALSO

RNP approach with GNSS



PRICE RANGE

Free of charge



ESTIMATED LEAD TIME

5 weeks



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

GNSS HT1000



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	NO	New Look	N/A
				Armonia	N/A

DESCRIPTION

The GNSS HT1000 system, uploaded with -006A software or any later approved versions and so far certified for P-RNAV operations, is also approved for Required Navigation Performance (RNP APCH down to LNAV minima) operations.

LNAV (Lateral Navigation) is a Non-Precision or 2D Approach with Lateral only navigation guidance provided by GNSS and an Aircraft Based Augmentation System (ABAS).

Lateral guidance is linear with accuracy to within +/- 0.3 NM parallel to either side of the final approach track.

RNP APCH requires aircraft conformance to a track-keeping accuracy of +/- 1NM during initial, intermediate and missed approach, and +/- 0.3 NM during final approach for at least 95% of flight time.

This modification consists in updating the Aircraft Flight Manual (AFM) in order to authorize RNP APCH operations.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	NO	New Look	N/A
				Armonia	N/A

BENEFITS

- Compliance with European requirements
- More direct routes with reductions in flight distances and fuel consumption
- More dual or parallel routes to accommodate a greater flow of traffic
- Better locations for holding patterns



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of operational publications

PRE-REQUISITE

Certification of GNSS P-RNAV

WEIGHT CHANGE

NONE

SEE ALSO

- 🔗 Single HT1000 GNSS Installation
- 🔗 P-RNAV with GNSS



PRICE RANGE

Free of charge



ESTIMATED LEAD TIME

5 weeks



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Activate the Automatically Dependent Surveillance-Broadcast “ADS-B OUT” DO-260 (RTCA standard) function.

ADS-B OUT makes possible the broadcast of aircraft data to other aircraft and to

ATC centers, even when there is no ATM radar coverage available.

Capabilities of ADS-B OUT DO-260 are listed below:

Function/Capability	Available/Comments
Indication of capabilities	Only Show status of TCAS and Cockpit Display of Traffic Information
Mode A	Yes, as a test message (USA only)
Navigation Uncertainty Category (NUCP)	Yes
Quality Indicator for Velocity (NUCR)	Yes






APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Reduced ground cost infrastructure
- Increased operational efficiency through aircraft tracking
- Access to shorter approaches inducing time and fuel savings

				
OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
✓	-	-	-	✓

PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation



PRE-REQUISITE

New Avionics Suite (NAS)

WEIGHT CHANGE

NONE

SEE ALSO

-  ADS-B Out DO-260A (Legacy)
-  ADS-B Out DO-260B (NAS)

PRICE RANGE

From \$ 8,000 equipment not included

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Activate the Automatically Dependent Surveillance- Broadcast “ADS-B OUT” DO-260A (RTCA standard) function. ADS-B OUT makes possible the broadcast of aircraft data to other aircraft and to ATC centers, even when there is no ATM radar coverage available.

Capabilities of ADS-B OUT DO-260A are listed below:

Function/Capability	Available/Comments
Barometric Altitude Integrity Code (NICBARO)	Yes, indicate integrity of Barometric altitude
GPS offset	Yes if GPS offset is applied
Indication of capabilities	Yes, e.g. Air Reference Velocity, Status of Identity Switch, Target State and Trajectory Change reports
Intention	Yes, intended altitude and heading
Length/Width of Aircraft	Yes, provide aircraft size
Mode A	Yes, as a test message (USA only)
Navigation Accuracy Category (NACP)	Yes, derived from Horizontal Figure of Merit and Vertical Figure Of Merit
Navigation Uncertainty Category (NUCP)	Yes
Quality Indicator for Velocity (NUCR)	Yes
Status of Resolution Advisory	Yes, if Resolution Advisory is or is not active
Surveillance Integrity Level And Source Integrity Level (SIL)	Yes






APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	NO	New Look	N/A
				Armonia	N/A

BENEFITS

- Reduced ground cost infrastructure
- Increased operational efficiency through aircraft tracking
- Access to shorter approaches inducing time and fuel savings

				
OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
✓	-	-	-	✓

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply



PRE-REQUISITE

ATC mode-S transponder with ADS-B capability

WEIGHT CHANGE

NONE

SEE ALSO

-  ADS-B Out DO-260B (NAS)
-  ADS-B Out DO-260B (Legacy avionics)

PRICE RANGE

From \$ 6,000

ESTIMATED LEAD TIME

2 months

ESTIMATED MAN POWER

4 hours

Subject to a possible specific adaptation to the relevant MSN.

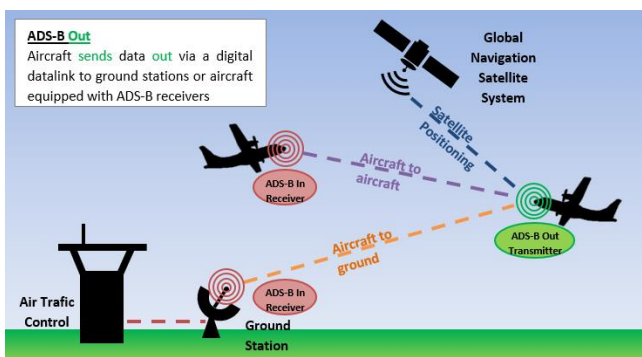
DESCRIPTION

Install the Automatic Dependent Surveillance-Broadcast “ADS-B OUT” DO-260B (RTCA standard) system on Pre-NAS series.

ADS-B OUT DO-260B makes possible the broadcast of aircraft data to other aircraft and to ATC centers, even where there is no ATM radar coverage available.

The upgrade surveillance option provides :

- Replacement of existing transponders by 2 new ACSS NXT-600 transponders
- Installation of 1 additional ACSS NXG-900 GPS + Antenna
- Installation of 1 ADS-B/ATC Fail Annunciator
- Associated ATR Kits



WEIGHT CHANGE

From -0.9 kg (-2.1 lb) to + 3.6 kg (+7.9 lb)

PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply
- Equipment supply

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	NO	New Look	N/A
				Armonia	N/A

BENEFITS

- Compliance under EASA and FAA 2020 mandate
- Reducing ground cost infrastructure (10 times cheaper than equivalent radar system)
- Increase the operational efficiency through aircraft tracking
- Access to shorter approaches inducing time and fuel savings
- All pre-NAS models are addressed by ATR upgrade solution
- Up-to-date technology transponders (NXT-600) and GPS (NXG-900)
- Updated OEM maintenance and operational documentation
- All equipment are supplied in factory new condition with 48 warranty period
- Will benefit from provisions of Vendor product support agreement
- Improved reliability compared to currently fitted ATC transponders



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY



PRE-REQUISITE

MPC (Multi-Purpose Computer)

SEE ALSO

- ➔ ADS-B Out DO-260B (NAS)
- ➔ ADS-B Out DO-260A (Legacy avionics)



PRICE RANGE

From \$ 140,000



ESTIMATED LEAD TIME

4 months



ESTIMATED MAN POWER

120 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

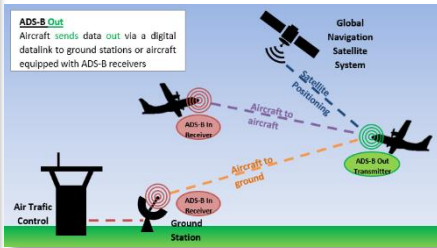
Install the Automatic Dependent Surveillance-Broadcast “ADS-B OUT” DO-260B (RTCA standard) system on ATR 600 series.

ADS-B OUT DO-260B makes possible the broadcast of aircraft data to other aircraft and to ATC centers, even where there is no ATM radar coverage available.

The option installs and integrates the ACSS Transponders type NXT600 (P/N 9006000-55000) in the avionic suite.



Interconnectability within ATC center, aircraft, and satellite.



PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply
- Equipment supply

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Compliance with EASA and FAA 2020 mandate
- Reduced ground cost infrastructure (10 times cheaper than equivalent radar system)
- Increased operational efficiency through aircraft tracking
- Access to shorter approaches inducing time and fuel savings



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT



CREW EFFICIENCY



PRE-REQUISITE

NAS Software standard 2 or superior;
MPC DMU software P/N L04451-1004 and
FDAU software P/N L04450-1001;
Second GPS SBAS receiver

WEIGHT CHANGE

+ 0.5 kg (+ 1.1 lb)

SEE ALSO

- ➔ ADS-B Out DO 260B (Legacy Avionics)
- ➔ ADS-B Out DO-260B activation in T³CAS



PRICE RANGE

From \$ 140,000



ESTIMATED LEAD TIME

2 months



ESTIMATED MAN POWER

30 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install the second GPS SBAS receiver, with the following capacities:

- B-RNAV (RNP 5) for en-route phase
- P-RNAV (RNP 1) for terminal area
- RNP APCH 0.3
- Advisory VNAV (data displayed on MCDU and Multi-Function Display)
- Performing radio-navigation frequencies auto-tuning
- Computing specific ATR speed references
- GPS primary means navigation & approach
- WAAS (North America)/EGNOS (European) capability (SBAS)
- ADS-B OUT DO-260B

Satellite-based augmentation systems (SBAS) complement existing Global Navigation Satellite Systems (GNSS) and significantly improves GNSS signal in terms of accuracy, integrity, continuity and availability.








APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

Improved navigation capability.

				
OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Kit Supply
- Update of operational & maintenance documentation
- Equipment supply (included): GPS receiver & GPS antenna



PRE-REQUISITE

SBAS GPS1

WEIGHT CHANGE

+ 2.9 kg (+ 6.4 lb)

SEE ALSO

-  VNAV function activation
-  ADS-B out DO-260B (NAS)

PRICE RANGE

From \$ 40,000 with equipment

ESTIMATED LEAD TIME

4 months

ESTIMATED MAN POWER

45 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

VNAV (Vertical Navigation) coupled to autopilot provides a vertical guidance managed by avionics systems.

Based on an automatic computation of the descent slope and rate, the aircraft follows a vertical profile and takes into account obstacles.

Flight crew training is required to get full benefits from the VNAV function.

FLIGHT GUIDANCE CONTROL PANEL VNAV BUTTON



PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Update of NAS option configuration file

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Reduced flight time and fuel burn (up to -2 min/ -20 kg per flight)
- Optimize flight plan
- Provide operational credits including reduced minima
- Enhanced operational safety
- Situational awareness
- Reduced crew workload
- 3D navigation



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT



CREW EFFICIENCY



PRE-REQUISITE

- NAS standard 2 or upper
- FGCP equipped with VNAV push-button

WEIGHT CHANGE

NONE

SEE ALSO

- 🔗 RNP AR 0.3/0.3 Capability
- 🔗 RNP AR 0.3/1 Capability
- 🔗 LPV



PRICE RANGE

From \$ 20,000



ESTIMATED LEAD TIME

5 weeks



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Localizer performance with vertical guidance (LPV) is an approach procedure based on GPS information improved by geostationary satellites, which allows the guidance of the aircraft in lateral & vertical plane without any ground station.

Performances are identical to ILS CAT I.



PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation
- Update of NAS option configuration file






APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Improved approach capability.
- Light training: reduced cost of customers.
- Developed where ILS is not in place: small airports, no specific ground infrastructure.

 OPERATIONAL COSTS SAVINGS	 MAINTENANCE COSTS SAVINGS	 OPERATIONAL BOOST	 PASSENGER COMFORT	 CREW EFFICIENCY
-	-	✓	-	-

PRE-REQUISITE

- NAS standard 2 or upper
- MPC DMU software P/N L04451 – 1004 and FDAU software P/N L04450 – 1001
- Dual GPS SBAS connected to CAC

WEIGHT CHANGE

NONE

SEE ALSO

 VNAV – Vertical Navigation

PRICE RANGE

From \$ 100,000

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This function allows the aircraft to fly in a curved corridor of +/- 0.3 NM for departure and +/- 1 NM for missed approach with high accuracy and obstacles protection.

Approach using RNP.AR capability.



PACKAGE CONTENT

- SB validation & supply
- Update of operational documentation
- Kits supply
- Updating of NAS option configuration file

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Improved flight path
- Reduce flight time
- Allow secured final approach on airport with difficult terrain & congested airspace



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT



CREW EFFICIENCY



PRE-REQUISITE

- 2nd GPS SBAS
- NAS standard 2 or upper
- Electronic check list V21 or upper
- ASDB and ACD files updated to P/N 9200000-04302 and 9200001-06803

WEIGHT CHANGE

NONE

SEE ALSO

[RNP AR 0.3/0.3 Capability](#)



PRICE RANGE

From \$ 180,000



ESTIMATED LEAD TIME

5 weeks



ESTIMATED MAN POWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This function allows the aircraft to fly in a curved corridor of +/- 0.3 NM for departure and missed approach with high accuracy and obstacles protection.

NOTE: This option requires the installation of new IRS equipment for continuity of aircraft position in case of GPS loss/outage during Missed Approach (and by extension during departure).

APPROACH USING RNP.AR



Enlarge approach and departure capabilities with an inertial reference system.

Difficult terrain or congested terminal areas operations.



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Update of operational documentation
- Kits supply
- Equipment supply
- Update of NAS option configuration file

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Improved flight path
- Reduced flight time
- Allow secured final approach on airport with difficult terrain & congested airspace



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT



CREW EFFICIENCY



PRE-REQUISITE

- 2nd GPS SBAS
- NAS standard 3 or upper
- ASDB and ACD files updated to P/N 9200000-04302 and 9200001-06803

WEIGHT CHANGE

+13.3 kg (+29.5 lb)

SEE ALSO

- ↳ Enhanced NAS software standard 3
- ↳ RNP. AR 0.3/1 Capability



PRICE RANGE

From \$ 550,000



ESTIMATED LEAD TIME

4 months



ESTIMATED MAN POWER

100 hours

Subject to a possible specific adaptation to the relevant MSN.

SKYLENS™ HEAD MOUNTED DISPLAY (HDM)

DESCRIPTION

Skylens™ is a Head-Mounted Display (HMD) projecting flight guidance symbols on the visor while head up and eyes out.

It allows a panoramic display capability controlled by optical trackers.



PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply
- Equipment supply

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	NO	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Give operational credits by reducing operating minima.
- Improve landing footprint and touchdown precision.
- Give real-time energy monitoring and improve assessments of deviation
- Less weight, simplified installation and cost effective compared to Head-Up Display (HUD)



OPERATIONAL COSTS SAVINGS



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT



CREW EFFICIENCY



PRE-REQUISITE

NAS standard 3 or upper standard

WEIGHT CHANGE

+ 10 kg (+ 22.0 lb)

SEE ALSO

Enhanced vision system



PRICE RANGE

On quote



ESTIMATED LEAD TIME

Depending on the configuration



ESTIMATED MAN POWER

Depending on the configuration

Subject to a possible specific adaptation to the relevant MSN.

ENHANCED VISION SYSTEM (EVS)

DESCRIPTION

ClearVision™ Enhanced Vision System (EVS) displays an augmented outside view in-real time through the use of a camera.

The camera fuses data from four color sensors, one night black-and-white sensor and one infrared black-and-white sensor to obtain a visual advantages to pilots through harsh weather conditions.



PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply
- Equipment supply

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	NO	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Give operational credits by reducing operating minima.
- Reduce number of delays, diversions and cancellations.
- Increase airline dispatch capability.
- Compatible with ILS, LPV and LNAV/VNAV approaches.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
✓	-	✓	-	✓

PRE-REQUISITE

Skylens™ Head-Mounted Display

WEIGHT CHANGE

+ 3 kg (+ 6.6 lb)

SEE ALSO

- ↳ Synthetic Vision System
- ↳ Skylens™ Head-Mounted Display

PRICE RANGE

On quote

ESTIMATED LEAD TIME

On quote

ESTIMATED MAN POWER

Depending on the configuration

Subject to a possible specific adaptation to the relevant MSN.

ATA 46 INFORMATION SYSTEMS

ATR
UPGRADE SOLUTION



DESCRIPTION

This upgrade solution consists in Mechanical & Electrical provision for the installation of two iPads (iPad 3/4 or iPad Air 1/2) to be used as EFB class I on both side of the cockpit. Tablet power supplied by a standard USB 2.0 connection (5VDC – 2 A). The cradle internal dimensions are 251 mm x 196 mm x 18 mm or 240 mm x 170 mm x 6 mm (depending of iPad size).

Enhanced I.T. applications and services are also proposed to support iPad deployment:

- Single-point Performance Software (SPS) licensing.
- Operational approval assistance (Hardware qualification tests, SPS Operational evaluation reports)

NOTE:

- Tablets and tablet casing are not supplied by ATR
- iPad 3/4 cradles are designed to be used with tablets fitted with Otterbox Defender protections
- ATR can provide a NTO (no technical objection) to the use of 5th and 6th generation iPads 9.7" in the iPad Air 2 cradles

PACKAGE CONTENT

- SB validation & supply
- Update of maintenance publications
- Kit supply
- Equipment supply: Cradle mounting assembly








APPLICABILITY




For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	YES	Original	N/A
ATR 72	ALL	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Improved weight loading factors due to the elimination of flight deck paper
- Faster and more accurate take-off and landing performance calculations
- Easier charts updates
- Significant savings due to elimination of paper output
- Fewer and shorter delays with easy last-minute adjustments

				
OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	-	-	✓

PRE-REQUISITE	NONE
WEIGHT CHANGE	+ 2.8 kg (+ 6.4 lb)
SEE ALSO	NONE
 PRICE RANGE	From \$ 15,000 cradles included. The iPad tablet is not supplied by ATR.
 ESTIMATED LEAD TIME	4 months
 ESTIMATED MAN POWER	20 hours

Subject to a possible specific adaptation to the relevant MSN.

ATA 52 DOORS

ATR
UPGRADE SOLUTION



DESCRIPTION

Installation of an actuating mechanism, which allows the opening of the front cargo door from inside the aircraft.



Internal opening mechanism



Handle detail

BENEFITS

Facilitates the egress of crew in cargo transportation aircraft.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS

-



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply

PRE-REQUISITE

Aircraft equipped with a front cargo door

WEIGHT CHANGE

+ 1.2 kg (+ 2.7 lb)

SEE ALSO

Versatile Cargo/Pax configuration



PRICE RANGE

From \$ 16,000



ESTIMATED LEAD TIME

4 months



ESTIMATED MAN POWER

80 hours

Subject to a possible specific adaptation to the relevant MSN.

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

DESCRIPTION

Depending on existing aircraft configuration, the following modifications are available to improve the lifting mechanism of the pax/crew door and increase fatigue strength:

- Replacement of the existing aluminum torque tube by a corrosion resistant torque tube with improved hinge bolt
- Installation of a reinforced counterbalance arm
- Replacement of the existing hook springs by titanium ones (resistant to corrosion) with new attachment system
- Replacement of the existing spring hook levers by levers of increased dimension
- Removal of the damper provision fitting
- Replacement of existing torque hinge bolts

For more information, please refer to Service Letter ATR42-52-5012 or ATR72-52-6012.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

Increased reliability & Simplified maintenance.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of maintenance documentation
- Kit supply

PRE-REQUISITE

NONE

WEIGHT CHANGE

Variable

SEE ALSO

NONE



PRICE RANGE

From \$ 3,000



ESTIMATED LEAD TIME

4 months



ESTIMATED MAN POWER

Variable

Subject to a possible specific adaptation to the relevant MSN.

ATA 53 FUSELAGE

ATR
UPGRADE SOLUTION



DESCRIPTION

The modification consists in installing the following protections:

- MARBILL protection on Main Landing Gear (MLG) fairings,
- Metallic protection on MLG doors,
- Protection under fuselage, forward the MLG belly fairings,
- A protective grid on anti-collision light.

NOTES:

- *With this option, the ATR "72-212A" MTOW when operating on unpaved runways is limited to 21,500 kg (47,399lb). Please refer to AFM for relevant limitations.*
- *For others models than ATR 42-500 and 72-212A, the technical solutions may be slightly different than the one described here above. Additional protection can be proposed.*



PACKAGE CONTENT

- SB validation & supply
- Update of operational & maintenance documentation
- Kit supply
- Marbill coating non included

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

- Compliance with local regulations
- Extension of the operational envelope
- Maintenance gains (minimized maintenance due to reduction of the damage risks)



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PRE-REQUISITE

NONE

WEIGHT CHANGE

Up to + 52 kg (+ 115 lb)

SEE ALSO

- Anti-collision light protection
- Increase maximum weights on unpaved runways



PRICE RANGE

From 8,000 USD to 50,000 USD depending on aircraft configuration and selected protection level



ESTIMATED LEAD TIME

4 months



ESTIMATED MAN POWER

From 8 to 80 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The modification consists in installing a protective grid on the belly fairing anti-collision light, to avoid damages from stone projection.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-300/ -320/ -400/ -500	Legacy	N/A	Original	N/A
		New Avionics Suite	N/A	New Look	N/A
ATR 72	ALL			Armonia	N/A

BENEFITS

Gain on maintenance costs due to reduction of risks of equipment deterioration.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB Validation & Supply
- Update of Maintenance Documentation
- Kit supply

PRE-REQUISITE

NONE

WEIGHT CHANGE

+ 1.5 kg (+ 3.3 lb)

SEE ALSO

- ↳ Unpaved runway operations
- ↳ LED installation



PRICE RANGE

From \$ 8,000



ESTIMATED LEAD TIME

2 months



ESTIMATED MAN POWER

10 hours

Subject to a possible specific adaptation to the relevant MSN.

FUSELAGE PROTECTION

WATER DEFLECTOR ON FRAME 45

DESCRIPTION

The modification consists in installing a water deflector forward of the frame 45 to avoid eventual water infiltration inside the aircraft through the gaps of inspection door.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy	N/A	Original	N/A
ATR 72	ALL	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

Limit the risk of water ingress in the CVR/FDR compartment.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB Validation & Supply
- Update of Maintenance Documentation
- Kit supply


PRE-REQUISITE

NONE

WEIGHT CHANGE

NONE

SEE ALSO

 Relocation of spring tabs draining holes



PRICE RANGE

From \$ 1,200



ESTIMATED LEAD TIME

4 months



ESTIMATED MAN POWER

15 hours

Subject to a possible specific adaptation to the relevant MSN.

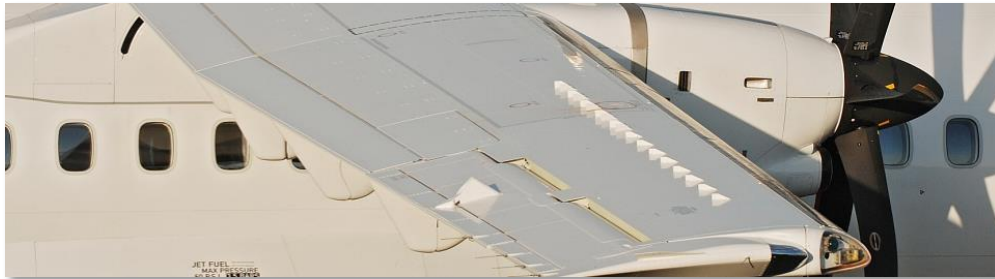
ATA 57 WINGS

ATR
UPGRADE SOLUTION



DESCRIPTION

In order to avoid corrosion by accumulation of water in the LH and RH aileron spring tabs, this modification consists in relocating the draining holes.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-200/ -300/ -320/ -500	Legacy	N/A	Original	N/A
		New Avionics Suite	N/A	New Look	N/A
ATR 72	-102/ -202/ -212/ -212A			Armonia	N/A

BENEFITS

Increased corrosion resistance.



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply

PRE-REQUISITE

NONE

WEIGHT CHANGE

NONE

SEE ALSO

Water deflector on frame 45



PRICE RANGE

From \$ 3,000



ESTIMATED LEAD TIME

5 months



ESTIMATED MAN POWER

100 hours

Subject to a possible specific adaptation to the relevant MSN.

ATA 61 PROPELLERS

ATR
UPGRADE SOLUTION



DESCRIPTION

Install a stand-alone permanent propeller Vibration Monitoring System (VMS).

VMS allows operators to constantly monitor and fine tune propeller vibration and replaces the previous temporary ground tooling systems used to monitor engine vibration. This equipment, supplied by Meggitt Sensing Systems, removes the need for airlines to organize regular ground testing or put maintenance personnel on revenue flights, therefore improving maintenance efficiency.

Reducing propeller vibration improves the comfort for everyone on board by minimizing vibration and engine noise in the cabin. It also improves the reliability of engine components and of the aircraft as a whole, and ultimately reducing Direct Maintenance Costs.



PRE-REQUISITE

NONE

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	NO	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

BENEFITS

- Optimize maintenance planning:
Avoid unnecessary balancing tasks
Automated monitoring and solution computation
- Reduce maintenance costs:
Increased reliability of engine mounted components
Reduced maintenance man hours
- Enhance passenger comfort



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit and equipment supply

WEIGHT CHANGE

+ 1 Kg (+ 2.2 lb)

SEE ALSO

WEFA



PRICE RANGE

From \$ 15,000



ESTIMATED LEAD TIME

5 months



ESTIMATED MAN POWER

200 hours

Subject to a possible specific adaptation to the relevant MSN.

ATA 71 POWER PLANT

ATR
UPGRADE SOLUTION



DESCRIPTION

Install the universal engine harness which is an evolution of the main Quick Engine Change (QEC) harness. The modification achieves full commonality between the ATR42 and ATR72 harnesses; it can equally be implemented on PW127E, F or M engines.

NOTE: This modification requires accomplishment of Pratt & Whitney Canada N° PW100-72-21763.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	N/A	Original	N/A
ATR 72	-212	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

- Improved reliability due to modified sensor connector torque
- Further optimization of provisioning and logistics costs arising out of fleet commonality and spares requirements for a single type of harness



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST

-



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply

PRE-REQUISITE

Depending on the aircraft configuration

WEIGHT CHANGE

NONE

SEE ALSO

Conversion to PW127M

PRICE RANGE

From \$ 5,000

ESTIMATED LEAD TIME

4 months

ESTIMATED MAN POWER

30 hours

Subject to a possible specific adaptation to the relevant MSN.

ATA 72 ENGINE

ATR
UPGRADE SOLUTION

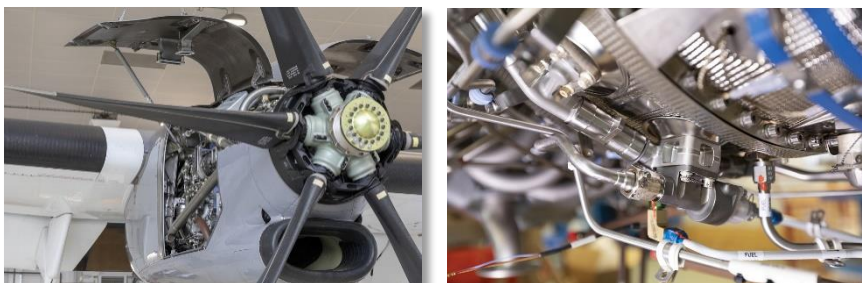


DESCRIPTION

Convert a PW127E or PW127F engine to a PW127M engine. Additional outstanding features of the PW127M engine are:

- 5% more powerful than PW127F
- Hot and high improved performance
- Automatic cycle count
- Universal engine harness
- Ready-mode for embodying the optional reserve take-off modification
- Ready-mode for embodying the optional boost modification (ATR72-212A)

For more information please refer to Pratt & Whitney Canada Service Bulletin N° PW100-72-21757.



PACKAGE CONTENT

- SB validation & supply
- Update of technical publications
- Kit supply
- Service Bulletin P&WC (not included)

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	-500	Legacy	N/A	Original	N/A
ATR 72	-212A	New Avionics Suite	N/A	New Look	N/A
				Armonia	N/A

BENEFITS

- Automatic cycle count
- Universal Engine Harness
- Ready-mode for embodying the optional Reserve Takeoff and Boost modification
- More powerful engine allows higher performance



OPERATIONAL COSTS SAVINGS

-



MAINTENANCE COSTS SAVINGS



OPERATIONAL BOOST



PASSENGER COMFORT

-



CREW EFFICIENCY

-

PRE-REQUISITE

- Universal engine harness
- Depends on your aircraft configuration: please contact us

WEIGHT CHANGE

Negligible (< 1kg (2.2 lb))

SEE ALSO

- 🔗 Take-off RTO (100% power)
- 🔗 Install boost function
- 🔗 Universal engine harness



PRICE RANGE

From \$ 3,000



ESTIMATED LEAD TIME

3 months



ESTIMATED MAN POWER

10 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Install a Boost function. The Boost function enables better PW127M engine performance in “hot and high” conditions. The modification involves the installation of a BOOST pushbutton so that the pilot can switch between normal and enhanced ratings as required.

Boost function allows the engine to be used with the enhanced PW127M thermodynamic ratings: Max Take Off thrust and Max Continuous Thrust rating 4% and up to 4,5% (depending on altitude) higher than PW127F.

Please refer to Aircraft Flight Manual (AFM) for new performance charts, limitations and procedures.

NOTE: Refer to AFM and maintenance manual for limitations and procedure.

BENEFITS

Increased allowable takeoff and landing weight in airports with weight limitations induced by high altitudes, hot temperatures and/or obstacles.

OPERATIONAL COSTS SAVINGS	MAINTENANCE COSTS SAVINGS	OPERATIONAL BOOST	PASSENGER COMFORT	CREW EFFICIENCY
-	-	✓	-	-

PACKAGE CONTENT

- SB validation & supply
- Update of operational and maintenance documentation
- Kit supply
- Equipment supply

PRE-REQUISITE

- PW127M Engine
- FDAU P/N ED34A350

WEIGHT CHANGE

+ 1.5 kg (+ 3.3 lb)

SEE ALSO

- Conversion to PW127M
- Take-off at RTO (100% power)

PRICE RANGE

From \$ 35,000 with equipment

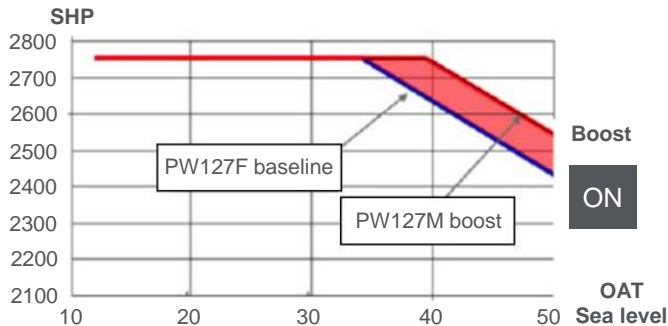
ESTIMATED LEAD TIME

4 months

ESTIMATED MAN POWER

120 hours

Subject to a possible specific adaptation to the relevant MSN.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	NONE	Legacy	YES	Original	N/A
ATR 72	-212A	New Avionics Suite	YES	New Look	N/A
				Armonia	N/A

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