



ATR UPGRADES SERVICES CATALOGUE

ATR 42 & 72
PRODUCT & SERVICES

Issue 02

ATR
PROPELLING THE NEXT CONNECTION

INFORMATION

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 Services Sales & Contracts Director or Customer Support Director.

Latest version available on ATRactive: <https://www.atractive.com/ServicesAndProjects/Catalogues/Pages>



WHY CHOOSE ATR RETROFIT SOLUTIONS?

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
Best Analysis & Quality Up-to-date Technology Proven Technical Solutions	OEM Certified Solutions Performance Standards Continuous Airworthiness and Regulation evolutions	Aircraft documentation update, configuration & tracking Post-modification definition allowing well-known basis for future evolutions	During SB installation & Throughout the aircraft's life Dedicated Working Parties	Operational Optimisation Fleet Harmonisation Direct Maintenance Cost Reduction

ATR

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EXTENSION OF THE ENVIRONMENTAL ENVELOPE TO -45°C

DESCRIPTION

This modification consists in extending the environmental envelope to -45°C, allowing 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.

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Wheels/tyre configurations (please contact us)			

BENEFITS

Extended operational envelope

- Operations in extreme cold temperature conditions

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

SEE ALSO

- Extension of the Environmental Envelope to -54°C
- Wheels and Brakes Replacements

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation

WEIGHT CHANGE

None

PRICE RANGE

From 500 USD per aircraft

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

None

Subject to a possible specific adaptation to the relevant MSN.

EXTENSION OF THE ENVIRONMENTAL ENVELOPE TO -54°C

DESCRIPTION

This modification consists in extending the environmental envelope to -54°C, allowing 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 CSA 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-300/42-320	Legacy avionics	YES	Original cabin	NO
ATR 72	Not applicable	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Wheels/tyre configurations (please contact us)			

BENEFITS

Extended operational envelope

- Operations in extreme cold temperature conditions

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

SEE ALSO

- Extension of the Environmental Envelope to -45°C
- Wheels and Brakes Replacements

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation
- Kit supply (only for landing gears modification)

WEIGHT CHANGE

None

PRICE RANGE

From 700 USD per aircraft

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

16 hours

Subject to a possible specific adaptation to the relevant MSN.

EXTENSION OF THE ENVIRONMENTAL ENVELOPE TO ISA +40

DESCRIPTION

This modification consists in extending the environmental envelope to ISA +40 (limited to + 50°C), allowing 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-300/42-320	Legacy avionics	YES	Original cabin	NO
ATR 72	72-211/72-212/72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Extended operational envelope

- Operations in extreme hot temperature conditions

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational Documentation

WEIGHT CHANGE

None

PRICE RANGE

From 500 USD per aircraft

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

None

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification enables operations with 15 kt tailwind at take-off and landing or 20 kt tailwind at take-off, gust included, allowing operations under specific weather condition. Embodiment of this upgrade requires only operational documentation update, no hardware change is needed.

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



APPLICABILITY






For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	15 kt tailwind limit at take-off and landing is standard for ATR42	Legacy avionics	YES	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Extended operation envelope

- Operations under specific weather conditions

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational Documentation

WEIGHT CHANGE

None

PRICE RANGE

From 2,500 USD per aircraft

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

None

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification enables 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 induces a correction of crosswind limit. For fuller information please refer to the Aircraft Flight Manual.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Extended operational envelope

- Operations on runways with local limitations

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

SEE ALSO

- Operations on High Altitude Runways
- Operations on Runways With a 2% Or Over Slope Factor
- Take-off at RTO (100% power)

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational Documentation

WEIGHT CHANGE

None

PRICE RANGE

From 500 USD per aircraft

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

None

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:

This modification consists in inhibiting the EXCESS CAB. 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:

This modification consists in updating 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-300/42-320/42-500	Legacy avionics	YES	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Minimum software version: Standard 2			



BENEFITS

Extended operational envelope

- Operations on high altitude runways with local limitations

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

SEE ALSO

-  Operations on Narrow Runways
-  Take-off at RTO (100% power)

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation
- Kit supply (only for aircraft equipped with Legacy Avionics)
- NOFU (only for aircraft equipped with New Avionics Suite)

WEIGHT CHANGE

None

PRICE RANGE

From 5,000 USD

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

Aircraft equipped with Legacy Avionics: 35 hours
Aircraft equipped with New Avionics Suite: 1 hour

Subject to a possible specific adaptation to the relevant MSN.

OPERATIONS ON RUNWAYS WITH A 2% OR OVER SLOPE FACTOR

DESCRIPTION

Implementation of this modification enables take-off and landing on runways sloping by a factor of 2% or over without hardware modification. This modification consists in updating the Aircraft Flight Manual (AFM) and induces a correction of tailwind limit.

Runway slope permitted with this modification and tailwind limit are listed below.

	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%	

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%.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-300/42-320/42-500	Legacy avionics	YES	Original cabin	NO
ATR 72	72-211/72-212/72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Extended operational envelope

- Operation on runways with local limitations

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

SEE ALSO

- Operations on Narrow Runways
- Operations on High Altitude Runways
- Take-off at RTO (100% power)

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational Documentation

WEIGHT CHANGE

None

PRICE RANGE

From 2,000 USD per aircraft

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

None

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Embodiment of this modification allows, through the application of a certified procedure, to use the RTO (Reserve Take-Off) power to improve the take-off performances on relatively short runways, enabling payload gain.

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

AFM updated, with the addition of new performance charts.

Examples of take-off performance improvements (ISA, S/L 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy Avionics	YES	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Applicable only on aircraft equipped with PW127M engine			

BENEFITS

Operational gains

- Increase of the allowable take-off and landing weight at airports with weight limitations induced by climb constraints (2nd segment, obstacles)

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

SEE ALSO

 Steep Slope Approach Capability

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational Documentation

WEIGHT CHANGE

None

PRICE RANGE

From 2,000 USD per aircraft

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

None

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This option allows an increase of 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)	19 700 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Operational gains

- Weights adjustments in accordance with operational needs (e.g. increase of transportation capability)

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

SEE ALSO

 Multiple Weight Variants Capability

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply (if needed)

WEIGHT CHANGE

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

PRICE RANGE

From 10,000 USD per 100 Kg MTOW increase

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

None

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

Multiple weight variants capability enables an operator to 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 AFM and in the WBM.

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

* Capability subject to local authorities acceptance.

	Weight Variant (WV)					
	WV 00	WV 10	WV 20	WV 30	WV 40	WV 50
MTOW (Maximum Take-Off Weight)	21 000 kg (46296 lb)	22 000 kg (48501 lb)	22 500 kg (49603 lb)	22 500 kg (49603 lb)	22 800 kg (50265 lb)	23 000 kg (50705 lb)
MZFW (Maximum Zero Fuel Weight)	20 000 kg (44092 lb)	20 000 kg (44092 lb)	20 300 kg (44753 lb)	20 500 kg (45194 lb)	20 800 kg (45856 lb)	21 000 kg (46296 lb)
MRW (Maximum Ramp Weight)	21 170 kg (46671 lb)	21 180 kg (46898 lb)	22 670 kg (49978 lb)	22 670 kg (49978 lb)	22 970 kg (50640 lb)	23 170 kg (51080 lb)
MLW (Maximum Landing Weight)	21 000 kg (46296 lb)	21 850 kg (48170 lb)	22 350 kg (49273 lb)	22 350 kg (49273 lb)	22 350 kg (49273 lb)	22 350 kg (49273 lb)






APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	Not applicable	Legacy avionics	NO	Original cabin	NO
ATR 72	72-212A	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Certification of the aircraft to the highest MTOW value			

BENEFITS

- Optimization of airport tax related to aircraft declared weight.

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

SEE ALSO

 Optional Design Weight Increase

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications

WEIGHT CHANGE

None

\$ PRICE RANGE

From 2,000 USD per aircraft

🕒 ESTIMATED LEAD TIME

5 weeks

👤 ESTIMATED MANPOWER

None

Subject to a possible specific adaptation to the relevant MSN.

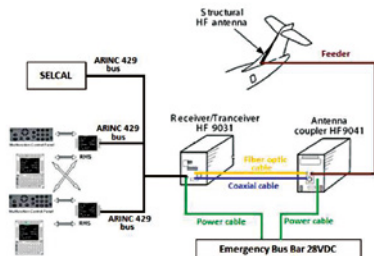
DESCRIPTION

This modification consists in installing a single HF 9000 COLLINS unit. This system allows voice communications in the 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-300/42-320/ 42-500	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

SEE ALSO

SELCAL System Installation

BENEFITS

Improved pilot performance

- Extended radio frequency range
- Improved immunity against electromagnetic interference from optional fiber links

Operational Boost

- Mandatory for ETOPS operations; allows to operate new routes

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

PACKAGE CONTENT

- SB Validation & Supply
- Updating 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)

WEIGHT CHANGE

+ 14.6 kg (+ 32.2 lb)
for HF installation
+ 23.4 kg (+ 51.7 lb)
for HF provision

PRICE RANGE

From 140,000 USD (provision + installation + equipment)

ESTIMATED LEAD TIME

5 months

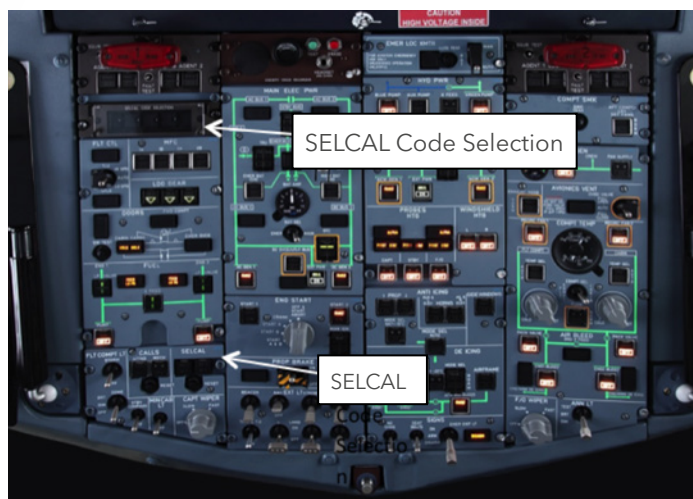
ESTIMATED MANPOWER

3 hours for HF installation
250 hours for HF provision

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in installing 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-300/42-320/42-400/42-500	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		VHF or/and HF systems			

BENEFITS

Improved pilot performance

- Reduced workload 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



SEE ALSO

 Single COLLINS HF 9000 Installation

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation
- Kit supply
- Equipment supply:
 - Selector code selection panel
 - Decoder

WEIGHT CHANGE

+ 1.6 kg (+ 3.5 lb)

\$ PRICE RANGE

From 45,000 USD equipment included

🕒 ESTIMATED LEAD TIME

4 months

👥 ESTIMATED MANPOWER

60 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification provides 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, 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 term of type of messages exchanged.

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO

PRE-REQUISITE

For non-NAS aircraft:

- Multipurpose Control and Display Unit (MCDU) with GNSS
- HT1000 installation
- Elementary surveillance (ELS)

For NAS aircraft: NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation
- Kit supply
- Equipment supply: ACARS computer, Transmitter/Receiver, ECU-3000, VHF transceiver and antenna

WEIGHT CHANGE

+ 4.6 kg (+ 10.1 lb)

BENEFITS

Increased operational and maintenance efficiencies

- From constant communication access to flight operations centers (e.g. early preparation of maintenance tasks while the aircraft is still in-flight)

Improved flight crew performance and flight safety

- Reduced workload due to the elimination of voice transmissions on routine information
- Faster and more accurate flow of information
- Reduced congestion on voice frequencies

Improved passenger service

- 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



SEE ALSO

NONE

PRICE RANGE

From 95,000 USD equipment included for aircraft equipped with New Avionics Suite
From 150,000 USD equipment included for aircraft equipped with Legacy Avionics

ESTIMATED LEAD TIME

5 months

ESTIMATED MANPOWER

300 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in installing 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 communications 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO

PRE-REQUISITE

- 3 Channels Remote Control Audio Unit (RCAU)
- Flight deck observer boomset

BENEFITS

- Allow Communication with the Observer
- Allows redundancy in case of pilot ACP unavailability

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Maintenance Documentation
- Kit supply
- Equipment supply:
 - Audio control panel
 - Remote control audio unit
 - Hand microphone
 - Hand microphone jack panel

WEIGHT CHANGE

+ 3kg (+ 6.6 lb)

PRICE RANGE

From 65,000 USD

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

50 hours

Subject to a possible specific adaptation to the relevant MSN.

BOSE BOOMSETS WITH ACTIVE NOISE REDUCTION INSTALLATION

DESCRIPTION

The modification consists in replacing existing boomsets by BOSE A20 boomsets P/N 324843-2070 provided BFE (plug is XLR-5 to get the ANR capability). 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. The characteristics of BOSE A20 boomsets are:

- Acclaimed noise reduction: 30% greater active noise reduction than conventional aviation headsets
- Active equalization for enhanced audio: automatically shapes and equalizes incoming signals for enhanced clarity and intelligibility
- Customizable audio prioritisation: choose "mute" to immediately mute an auxiliary audio signal when receiving a communication.
- Side swappable mic: connect the mic to either the left or right earcup.
- Comfortable, stable fit: 30% less clamping force than conventional aviation headsets.
- Bluetooth connectivity: wireless connect to your Bluetooth-enabled devices.
- Fully certified: 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.



BOSE A20 boomset
(provided BFE)






BENEFITS

Improved pilot performance

- By using boomsets with Active Noise reduction system

Maintenance gains

- Retrofitting can be applied progressively to cover entire fleets

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications
- Kit supply
- BOSE boomsets not supplied by ATR

WEIGHT CHANGE

From none to + 1.5 kg (+ 3.3 lb)
depending on current configuration

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO

PRE-REQUISITE

- 3 Channels RCAU
- 3rd ACP

PRICE RANGE

From 1,000 USD (Sennheiser noise reduction Captain and FO boomsets replacement)
From 22,000 USD (Team Captain and FO boomsets replacement including jack panels)

ESTIMATED LEAD TIME

3 months

ESTIMATED MANPOWER

1 hour for aircraft already equipped with ANR capability
8 hours for other aircraft

Subject to a possible specific adaptation to the relevant MSN.

INSTALLATION OF SSCVR

WITH 90 DAYS ULB AND 120 MINUTES RECORDING DURATION

DESCRIPTION

This modification proposes the replacement of 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Maintenance gains

- Low cost of ownership and simpler maintenance
- Higher recording capacity and higher reliability


Operational gains

- High recording quality
- Reduced weight

Compliance with Local Regulatory Requirements

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

SEE ALSO

 Installation of SSCVR With Data Link Recording

 Installation of SSFDR With 90 Days ULB

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications
- Equipment supplied:
- SSCVR

WEIGHT CHANGE

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

\$ PRICE RANGE

From 21,000 USD equipment included

🕒 ESTIMATED LEAD TIME

2 months

👤 ESTIMATED MANPOWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

INSTALLATION OF SSCVR WITH DATA LINK RECORDING

DESCRIPTION

This modification proposes the replacement of existing Cockpit Voice Recorders (CVR or SSCVR) by a new type, the Solid State Cockpit Voice Recorder (SSCVR) with data link recording. SSCVR utilizes a Crash-Survivable Memory Unit (CSMU) for the protection of the solid state voice recording memory and retains most recent 120 minutes information.

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



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Maintenance gains

- Low cost of ownership and simpler maintenance
- Higher recording capacity and higher reliability

Operational gains

- High recording quality
- Reduced weight

Compliance with Local Regulatory Requirements

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

SEE ALSO

- ✦ Installation of SSCVR With 90 Days ULB and 120 Minutes Recording Duration
- ✦ Installation of SSFDR With 90 Days ULB

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications
- Equipment supplied:
 - SSCVR

WEIGHT CHANGE

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

\$ PRICE RANGE

From 25,000 USD equipment included

🕒 ESTIMATED LEAD TIME

2 months

👤 ESTIMATED MANPOWER

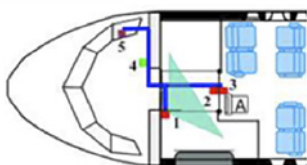
1 hour

Subject to a possible specific adaptation to the relevant MSN.

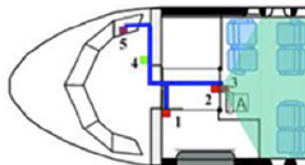
DESCRIPTION

This modification consists in installing 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.

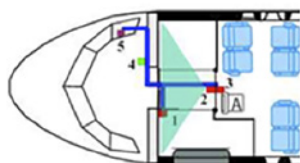
Cargo compartment camera



Cabin camera



Cockpit door camera



Cockpit monitor



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	See "pre-requisite"	Legacy avionics	YES	Original cabin	YES
ATR 72	ALL	New avionics suite	YES	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		Application of the modification Cockpit security door installation			

BENEFITS

- Compliance with ICAO and EU-OPS requirements
- Enhanced Security
 - 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



SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- Equipment supply

WEIGHT CHANGE

+ 5 kg (+ 11 lb)

PRICE RANGE

20,000 to 30,000 USD

ESTIMATED LEAD TIME

3 months

ESTIMATED MANPOWER

70 hours

Subject to a possible specific adaptation to the relevant MSN.

STARTER GENERATOR REPLACEMENT (EXTENDED BRUSH LIFE)

DESCRIPTION

The modification consists in changing 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 have 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

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
-	✓	-	-	-

SEE ALSO

NONE

PACKAGE CONTENT

For fuel drain pipe replacement only:

- SB Validation & Supply
- Updating of Technical publications
- Kit supply

For starter generators replacement:

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

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

PRICE RANGE

See RIL-2017-07

ESTIMATED LEAD TIME

3 months

ESTIMATED MANPOWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

COCKPIT SEATS

ENHANCED COMFORT CAPTAIN & FIRST OFFICER SEATS

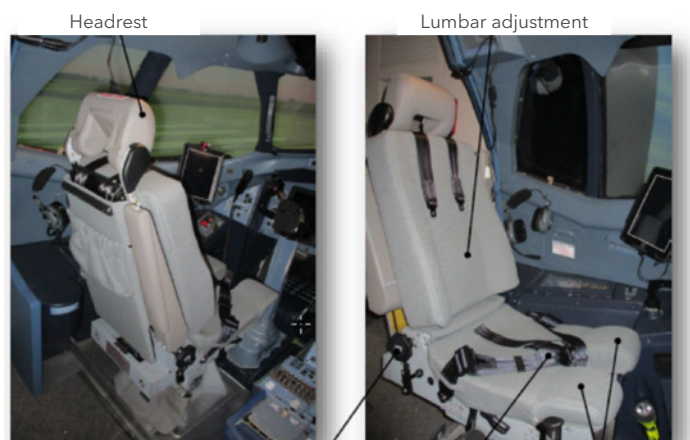
DESCRIPTION

This modification consists in replacing 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.



Headrest Lumbar adjustment
Lumbar adjustment wheel 5 Points restraint system Thigh rest

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

- Enhanced Captain and First Officer comfort and cockpit seats ergonomics

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications
- Kit supply
- Equipment supply (not included)

WEIGHT CHANGE

+ 4.5 kg (+ 8.7 lb)

PRICE RANGE

From 2,500 USD without equipment

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in installing one supplementary Protective Breathing Equipment for the observer in the cockpit behind the captain seat (LH side), bringing to 3 the number of PBE in the cockpit.

The PBE hood envelopes 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

- Allows to equipped the observer with oxygen equipment

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Maintenance Documentation

WEIGHT CHANGE

+ 2.5 kg (+ 5.5 lb)

\$ PRICE RANGE

From 10,000 USD without equipment

🕒 ESTIMATED LEAD TIME

3 months

👤 ESTIMATED MANPOWER

2 hours

Subject to a possible specific adaptation to the relevant MSN.

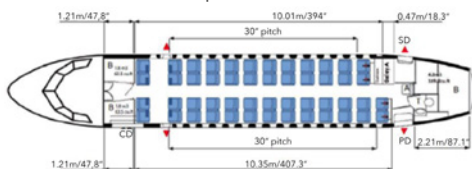
DESCRIPTION

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.

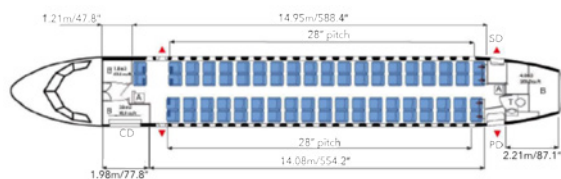
ATR42 CONFIGURATION

Interior configuration of 50 seats at 30" pitch



ATR72 CONFIGURATION

Interior configuration of 78 seats at 28" pitch



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	YES
ATR 72	ALL	New avionics suite	NO	New-look cabin	YES (only certain seat layout available)
				Armonia cabin	YES
PRE-REQUISITE		NONE			

BENEFITS

Operational gains

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

Improved passenger comfort

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

SEE ALSO

- ✎ Passenger Seats Replacement Given Neo-Classic and Neo-Prestige Seats
- ✎ Passenger Seats Replacement Expliseat Titanium Seats
- ✎ Galley Modification
- ✎ Rear Cargo Compartment Galley Storage Unit
- ✎ Additional Stowage Unit
- ✎ Cargo Flex

PRICE RANGE

On quote

ESTIMATED LEAD TIME

On quote

ESTIMATED MANPOWER

On quote

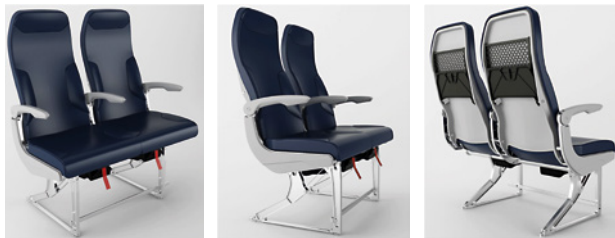
Subject to a possible specific adaptation to the relevant MSN.

PASSENGER SEATS REPLACEMENT

GEVEN NEO-CLASSIC AND NEO-PRESTIGE SEATS

DESCRIPTION

This modification consists in replacing existing passenger seats with new Neo-Classic or Neo-Prestige Geven seats with outstanding features. Geven Neo-Classic and Neo-Prestige seats are lightweight with a carbon backrest and have a modern design specially developed for the ATR Cabin; 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.



Geven Neo-Classic seats



Geven Neo-Prestige seats

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		NONE			

BENEFITS

Passenger comfort gains

- High sitting comfort
- Modern appearance
- Improve living space

Payload increase benefit

- About 2 pax saving with Geven "Neo-Classic" seats
- About 1 pax saving with Geven "Neo-Prestige" seats

Fuel saving benefit and more environmental friendly

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

SEE ALSO

- ✦ Cabin Reconfiguration
- ✦ Passenger Seats Replacement Expliseat Titanium Seats

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications

WEIGHT CHANGE

SEATTYPE	Neo-Classic	Neo-Prestige
Standard seat	16.0 kg (35.2 lb)	21.0 kg (46.2 lb)
In Arm Table seat	21.0 kg (46.2 lb)	26.0 kg (57.2 lb)
Rear facing seat	26.5 kg (58.3 lb)	31.5 kg (69.3 lb)

PRICE RANGE

On quote

ESTIMATED LEAD TIME

On quote

ESTIMATED MANPOWER

On quote

Subject to a possible specific adaptation to the relevant MSN.

PASSENGER SEATS REPLACEMENT
EXPLISEAT TITANIUM SEATS

DESCRIPTION

This modification consists in replacing existing passenger seats with new Expliseat Titanium seats.

Expliseat Titanium seats are lightweight (5.5 kg (11 lb)) and allow to save up to 300 kg (661.4 lb) when compared to standard ATR '600 series' cabin configuration. These new seats will enable to get substantial fuel savings and to further enhance payload capacity and operational flexibility at short runways or at hot and high environments.

Expliseat Titanium seats feature only 40 non corrosive material parts per seat, thus reducing their maintenance costs. With an innovative design and the association of carbon fiber and titanium, seats allow passengers to travel comfortably and safely. These non recline seats are fully customizable.

Expliseat seats enable high density configuration. For fuller information please refer to "Cabin reconfiguration" modification.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	YES
ATR 72	ALL	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		NONE			

BENEFITS

Operational gains

- Lightweight seats
- Fuel savings (less CO2 per pax)
- Enhanced payload capacity
- Operational flexibility at short runways or at hot and high environment
- Allow high density configuration, e.g. 78 pax configurations in ATR72 aircraft

Maintenance gains

- Reduced maintenance costs with non corrosive materials


Higher durability (compared to traditional aluminum seats)

Fully customizable

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

SEE ALSO

 Cabin Reconfiguration

 Passenger Seats Replacement Given Neo-Classic and Neo-Prestige Seats

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications

WEIGHT CHANGE

Up to - 300 kg (- 661.4 lb) compared to the original ATR '600 series' cabin configuration

PRICE RANGE

On quote

ESTIMATED LEAD TIME

On quote

ESTIMATED MANPOWER

On quote

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 as Hot jugs, Water heater, Coffee maker or Espresso machine installation, Ovens, USB plug and Ice unit and can be adapted to customer needs:

- Hot jugs
- Ovens
- Water heater
- USB plug (Smart galley only)
- Coffee maker or Espresso machine installation
- Ice unit



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	YES
ATR 72	ALL	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		NONE			

BENEFITS

Enhanced passenger service

Enhanced flight crew performance

- Easier and faster service due to the customer standardizing a chosen galley configuration throughout the fleet



OPERATIONAL
COSTS SAVINGS

-



MAINTENANCE
COSTS SAVINGS

-



OPERATIONAL
BOOST

-



PASSENGER
COMFORT



CREW
EFFICIENCY



SEE ALSO

- Additional Stowage Unit
- Cabin Reconfiguration

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications

WEIGHT CHANGE

Variable

\$ PRICE RANGE

On quote

🕒 ESTIMATED LEAD TIME

On quote

👤 ESTIMATED MANPOWER

On quote

Subject to a possible specific adaptation to the relevant MSN.

REAR CARGO COMPARTMENT GALLEY STORAGE UNIT

DESCRIPTION

ATR has developed several solutions in answer to customer requests for extra galley storage capacity in rear cargo compartment.

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
- F3: dual upper shelf (Total 3 S/U storage capacity + 1 Water heater) + 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	YES (Standard Galley storage)
ATR 72	ALL	New avionics suite	NO	New-look cabin	YES (Standard Galley storage unit or F1)
				Armonia cabin	YES (Galley Storage unit F1, F2 or F3)
PRE-REQUISITE		NONE			

BENEFITS

- Enhanced passenger service
- Enhanced flight crew performance

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation
- Kit supply
- Equipment supply

WEIGHT CHANGE

Standard Galley storage unit:
+ 30 kg without any equipment
F1 Galley: + 7 kg (15.4 lb) without any equipment
F2 Galley: + 13 kg (+ 28.6 lb) without any equipment
F3 Galley: + 50 kg (+ 110 lb) with W/H + tank

PRICE RANGE

From 6,000 USD

ESTIMATED LEAD TIME

From 4 months

ESTIMATED MANPOWER

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 compartment are fully customizable: inside part can be equipped with various configurations depending on customer requests and needs, and outside part can be customize 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 or accommodate with 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



Example of stowage with net

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	YES
ATR 72	ALL	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		NONE			

BENEFITS

Enhanced passenger service

- Increased cargo capacity for luggage, coats, etc.

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

SEE ALSO

- Cabin Reconfiguration
- Galley Modification
- Cargo Flex
- Secured Stowage in Forward Cargo Compartment

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications

WEIGHT CHANGE

Variable

PRICE RANGE

On quote

ESTIMATED LEAD TIME

On quote

ESTIMATED MANPOWER

On quote

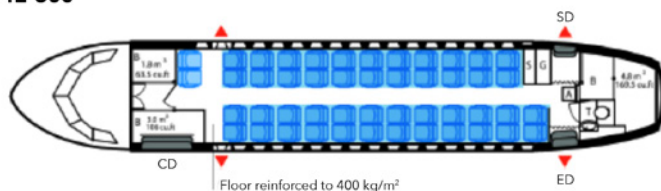
Subject to a possible specific adaptation to the relevant MSN.

CABIN FLOOR - TOTAL FLOOR
REINFORCEMENT (400 KG/M²)

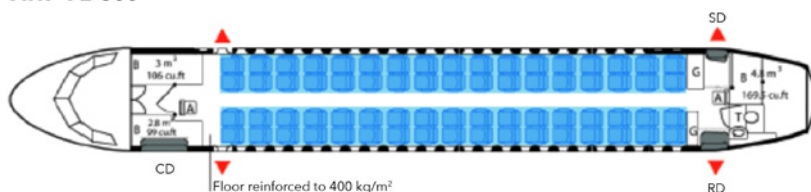
DESCRIPTION

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.

ATR "42-600"



ATR "72-600"



Maximum vertical load density increased from 200 kg/m² to 400 kg/m²

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	YES
ATR 72	ALL	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		NONE			

BENEFITS

- Floor resistance improved
- Allow embodiment of "Cargo Flex" modification



OPERATIONAL
COSTS SAVINGS

-



MAINTENANCE
COSTS SAVINGS

-



OPERATIONAL
BOOST



PASSENGER
COMFORT

-



CREW
EFFICIENCY

-

SEE ALSO

 Cargo Flex

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Documentation

WEIGHT CHANGE

+ 9 kg (+ 19.8 lb) for ATR72

PRICE RANGE

From 110,000 USD

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

100 hours

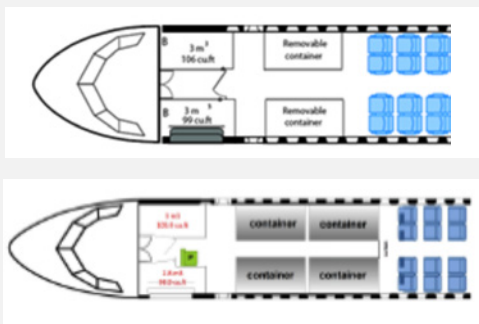
Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in installing 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. One 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)
- Transportable mass: 450 kg (density 208 kg/m³)
- Weight: 64.4 kg



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-212A	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		<ul style="list-style-type: none"> • Floor panels at 400 kg/m² • Large aft cargo bay with straight partition 			

BENEFITS

- Increased cargo capacity



OPERATIONAL
COSTS SAVINGS



MAINTENANCE
COSTS SAVINGS

-



OPERATIONAL
BOOST

-



PASSENGER
COMFORT

-



CREW
EFFICIENCY

-

SEE ALSO

Cabin floor - Total Floor Reinforcement (400 kg/m²)

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications
- Kit supply
- Equipment supply:
 - LH containers
 - RH containers

WEIGHT CHANGE

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

PRICE RANGE

From 250,000 USD for two "Class B" containers configuration

ESTIMATED LEAD TIME

10 months

ESTIMATED MANPOWER

100 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The modification consists in providing the provisions for Phitek Cabinstream™ IFE Wi-Fi streaming installation in overhead bins.

The (Amphenol) Phitek Cabinstream™ IFE Wi-Fi brings high-quality wireless media streaming to personal electronic devices for an uninterrupted and reliable passenger IFE experience.

Being battery-powered, this stand-alone, portable content delivery system eliminates expensive aircraft modifications, reducing total cost of ownership while providing the best in-class passenger entertainment.

Cabinstream's open platform can host a range of IFE services such as multi-user audio and video on-demand, browser-based gaming, electronic publications and on-board shopping. Its open platform allows airlines to customize the look and feel of their IFE service by branding the user interface. Media are broadcast via Wi-Fi IEEE 802.11b standard (2.5 GHz/5.0 GHz) router able to serve the whole passenger cabin and stored

on a 1 TB Solid State disk drive supplied on NiMH battery (12 hours autonomy). Cabinstream device weighs less than 6 kg and is qualified to RTCA DO-160 aerospace regulations for Environmental and EMI (ElectroMagnetic Interference).

The modification precisely consists in providing the aircraft with:

- An AFM authorization. Demonstrations have been performed to check T-PED Wi-Fi compatibility with ATR A/C Systems.
- A set of Job Instruction Cards, in order to securely install or uninstall easily (no need of tools) the Wi-Fi device, its battery, its protection and installation

NOTE: The (Amphenol) Phitek Cabinstream™ device is not provided in the modification, and will have to be procured/rented directly to Phitek. Please contact Phitek (phitek.com) for any further details.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		NONE			

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
- No electrical connection with aircraft, allowing an easy retrofit installation



OPERATIONAL
COSTS SAVINGS

-



MAINTENANCE
COSTS SAVINGS

-



OPERATIONAL
BOOST

-



PASSENGER
COMFORT



CREW
EFFICIENCY

-

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational Documentation

WEIGHT CHANGE

For information device weight less than 6 kg

\$ PRICE RANGE

From 2,500 USD

🕒 ESTIMATED LEAD TIME

5 weeks

👤 ESTIMATED MANPOWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The modification consists in installing a nursing table in the lavatory, together with the related placard stickers.

Main features:

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



Nursing table folded



Nursing table unfolded

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-212A	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	YES
PRE-REQUISITE		NONE			

BENEFITS

- Improved passenger comfort and services

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Documentation

WEIGHT CHANGE

+ 4 kg (+ 8.8 lb)

PRICE RANGE

From 6,000 USD

ESTIMATED LEAD TIME

3 months

ESTIMATED MANPOWER

15 hours

Subject to a possible specific adaptation to the relevant MSN.

SECOND STAND-ALONE EMERGENCY LOCATOR TRANSMITTER (ELT)

DESCRIPTION

The modification provides 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	YES
ATR 72	ALL	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		NONE			

BENEFITS

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



OPERATIONAL
COSTS SAVINGS

-



MAINTENANCE
COSTS SAVINGS

-



OPERATIONAL
BOOST

-



PASSENGER
COMFORT

-



CREW
EFFICIENCY

-

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications
- Kit supply
- Equipment supply:
 - ELT
 - ELT bag

WEIGHT CHANGE

+ 2 kg (+ 4.4 lb)

\$ PRICE RANGE

From 15,000 USD

🕒 ESTIMATED LEAD TIME

3 months

👤 ESTIMATED MANPOWER

2 hours

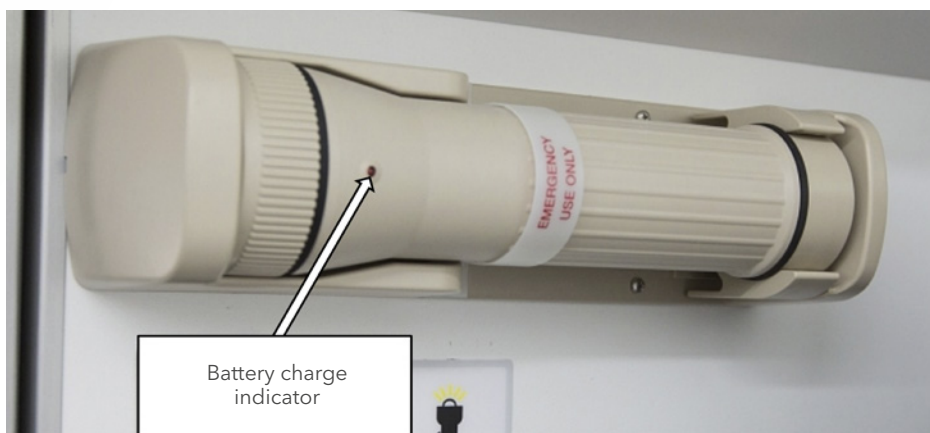
Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The modification consists in replacing 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	YES
ATR 72	ALL	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		NONE			

BENEFITS

Time maintenance gain

- Maintenance check limited to visual control of the indicator

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- Equipment supply (except particular conditions agreed through commercial offer)

WEIGHT CHANGE

None

PRICE RANGE

From 8,000 USD

ESTIMATED LEAD TIME

2 months

ESTIMATED MANPOWER

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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	Not applicable	Legacy avionics	NO	Original cabin	YES
ATR 72	72-102 / 72-202 72-212 / 72-212A	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		Rear attendant seat compatible. Specific analysis to be done for aircraft equipped with "Original" cabin.			

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



SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply

WEIGHT CHANGE

None

PRICE RANGE

From 8,000 USD

ESTIMATED LEAD TIME

3 months

ESTIMATED MANPOWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in installing a modified rear LH 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) is not provided and shall 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-400/42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-102/72-202/72-212/72-212A	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES

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

BENEFITS

- Quick change for Medevac Operations



OPERATIONAL
COSTS SAVINGS

-



MAINTENANCE
COSTS SAVINGS

-



OPERATIONAL
BOOST



PASSENGER
COMFORT

-



CREW
EFFICIENCY

-

Modified rear LH bulkhead



Seats modification to enable quick release for break-over



View of the bulkhead folded

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications
- Kit supply

WEIGHT CHANGE

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

PRICE RANGE

From 10,000 USD

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

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 object (weapons, highly-value items).

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

Width (mm)	Depth (mm)	Height (mm)	Capacity
416	613	478	50 kg (110 lb)
515	360	500	70 kg (154 lb)








APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-212A	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		NONE			

BENEFITS

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

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation
- Kit supply
- Equipment supply:
 - Stowage compartment

WEIGHT CHANGE

+ 15 kg (+ 33 lb)

PRICE RANGE

From 43,000 USD equipment included

ESTIMATED LEAD TIME

6 months

ESTIMATED MANPOWER

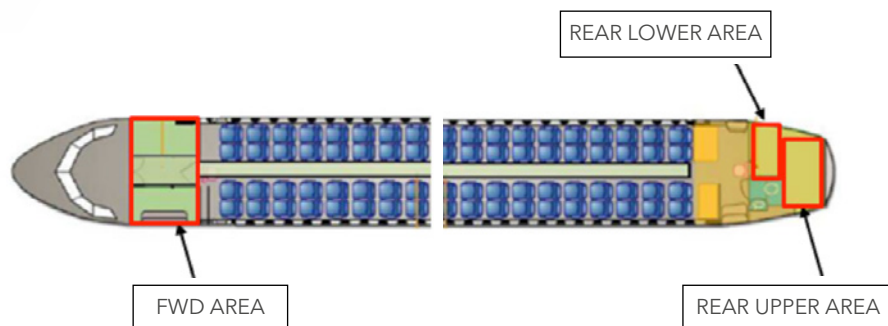
10 hours

Subject to a possible specific adaptation to the relevant MSN.

CARGO COMPARTMENTS
INSTALL A FLOOR COVERING

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. In answer to this operational issue ATR proposes a modification which consists in protecting the existing cargo floor panels (in forward and/or rear cargo area) by a non-textile floor addition on upper surface. This additional protection allows to preserve cargo area floor panels and to eliminate the need to replace it.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	YES
				Armonia cabin	YES
PRE-REQUISITE		NONE			

BENEFITS

- Floor panels protected

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

SEE ALSO

- Cabin floor - Total Floor Reinforcement (400 kg/m²)

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Documentation
- Kit supply:
 - Flat rail cover
 - Thresholds

WEIGHT CHANGE

+ 8 kg (+ 17.6 lb) per cargo area

PRICE RANGE

From 10,000 USD for forward cargo compartment

ESTIMATED LEAD TIME

4 months

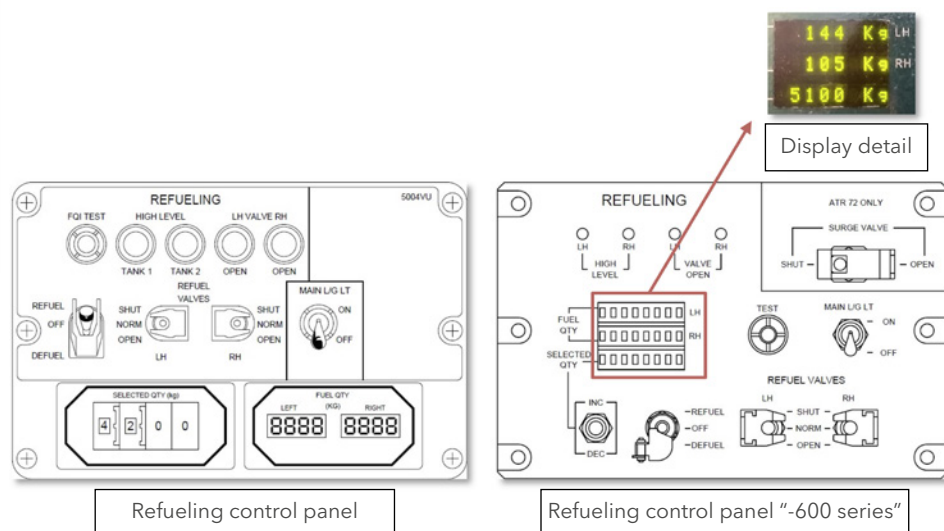
ESTIMATED MANPOWER

10 hours

Subject to a possible specific adaptation to the relevant MSN.

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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

- Compliance with operational requirements

SEE ALSO

Standby Altimeter - Millibars/Inches of Mercury Indication

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Equipment supply (except for -600 series, pin-programming only)

WEIGHT CHANGE

None

PRICE RANGE

From 5,000 USD (equipment excluded)
From 46,000 USD (equipment included)

ESTIMATED LEAD TIME

2 months

ESTIMATED MANPOWER

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

Subject to a possible specific adaptation to the relevant MSN.

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.

This 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		SSFDR P/N 2100-4045-00			

BENEFITS

- Compliance with Local Regulatory Requirements

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Supply
- Technical Publication updating

WEIGHT CHANGE

Negligible (<1 kg (2.2 lb))

PRICE RANGE

Free Of Charge

ESTIMATED LEAD TIME

None

ESTIMATED MANPOWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in the activation of the Wireless Extension For ACMS (WEFA) function. On aircraft not equipped with Multi-Purpose Computer (MPC) WEFA ready this option includes the MPC upgrade.

The WEFA system allows a wireless transmission 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 in on ground.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

- Time gain due to automatic data download
- Continuous flight data monitoring
- Anticipation of maintenance tasks

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- For GMA customer: PCMCIA card and MPC upgrade

WEIGHT CHANGE

+ 0.18 kg (+ 0.4 lb)

PRICE RANGE

From 4,500 USD without equipment
From 26,400 USD including MPC upgrade and memory card

ESTIMATED LEAD TIME

2 months

ESTIMATED MANPOWER

7 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The application of the Standard 3 New Avionics Suite software allows benefiting from improved features:

- **Anticipated ILS & LPV capture**

ILS LOC and LPV capture are anticipated (using FMS data) so that capture at high speeds, high interception angle, close to threshold is more efficient.

- **Auto-Pilot domain extension**

Auto Pilot can be engaged above the max bank angle (27° in high bank conditions; 15° in low bank conditions). Ultimately, the Auto Pilot can be engaged up to 45° (in high bank conditions) or 30° (in low bank conditions). This feature aims at bringing the aircraft back to the authorized domain (+/-27° in high bank conditions; +/-15° in low bank conditions).

- **High speed protection**

STD2 was certified for VNAV PATH and VNAV VS modes in CLEAN & FLAP 15° configurations. STD3 is extended to PITCH HOLD, VS & ALT* modes.

- **Low speed protection**

Implemented for PITCH HOLD, VNAV ALT*, ALT* and VS modes in CLEAN, FLAP 15° & FLAP 25° (ATR42) configurations

- **Temporary flight plan display on the ND**

As soon as a temporary flight plan is created, it is displayed on ND (Navigation Display) simultaneously with the ACTIVE, allowing checking TMPY revisions before activation

- **Engine-Out Standard Instrument Departure (EOSID)**

A TMPY FPLN (temporary flight plan) is automatically created and displayed on

Navigation Display upon detection of engine-out or engine fire during departure. Upon crew execution, EOSID is automatically flown.

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

- **RNP AR 0.3/0.3**

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

- **Integration of the clocks on the Display Units**
Relative equipment is deleted.

- **Synthetic Vision System (SVS)**

On the Display Units #1 & #5, the artificial horizon is replaced by a virtual picture of the terrain, which data is loaded in a resident compact flash).

- **Electronic Checklist customization**

Provide capability for Airlines to customize a subset of the Normal ECL, to be used in addition to those defined by ATR.

- **Company Routes**

Provide capability for Airlines to order customized NDB (Navigation Data Base) including their company routes. During the packing/distribution process within Thales

(Nav DB supplier), a consistency check is performed between CORTE (Company Route) and applicable AIRAC (Aeronautical Information Regulation And Control) NDB cycle.

Others options which developments are still in progress. Loading of the Standard 3 software is only possible with Thales PMAT Software Suite standard V4.

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		<ul style="list-style-type: none"> • NAS Software Standard 2.1 • MPC DMU software P/N L04451-1006 and FDAU software P/N L04450-1002 			

BENEFITS

- Improvement of crew efficiency and comfort.
- Capability for implementation of new options allowing flight routes optimizations and operational costs savings.

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

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Equipment supply (software)

WEIGHT CHANGE

None

PRICE RANGE

From 22,000 USD

ESTIMATED LEAD TIME


8 weeks

ESTIMATED MANPOWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

SEE ALSO

 RNP AR 0.3/0.3 Capability

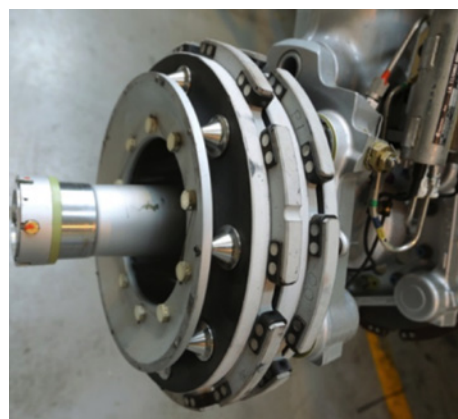
WHEELS AND BRAKES REPLACEMENTS

DESCRIPTION

This modification consists in replacing landing gear wheels and/or brakes. Depending on customer needs (extreme cold conditions for example) and preferences wheels and brakes from different manufacturer 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Maintenance gains

- 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
-	✓	-	-	-

SEE ALSO

- ✦ Extension of the Environmental Envelope to -45°C
- ✦ Extension of the Environmental Envelope to -54°C

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications
- Equipment supply (not included)

WEIGHT CHANGE

From - 8 kg to + 8 kg (+ 17.6 lb)

\$ PRICE RANGE

From 500 USD equipment not included

🕒 ESTIMATED LEAD TIME

5 weeks

👤 ESTIMATED MANPOWER

4 hours per landing gear

Subject to a possible specific adaptation to the relevant MSN.

ANTI-COLLISION LIGHTS

COLOR REPLACEMENT

DESCRIPTION

In accordance with customer operational requirements, this modification allows to 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Specific study should be carried through for oldest aircraft to determine if additional Service Bulletins have to be applied			

BENEFITS

- Compliance with operational requirements.

SEE ALSO

- 🔗 Anti-collision Lights With LED Technology
- 🔗 Anti-collision Light Protection

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply (for halogen system only)
- Equipment supply

WEIGHT CHANGE

- LED system: none
- Halogen system:
 - white to red: + 1.4 kg (+ 3 lb)
 - red to white: none

💰 PRICE RANGE

From 6,500 USD to 15,000 USD depending on the aircraft configuration

🕒 ESTIMATED LEAD TIME

3 months

👤 ESTIMATED MANPOWER

From 4 hours (LED) to 60 hours (White to Red halogen)

Subject to a possible specific adaptation to the relevant MSN.

ANTI-COLLISION LIGHTS

WITH LED TECHNOLOGY

DESCRIPTION

The evolution consists in replacing the current halogen anti-collision lights by anti-collision lights using LED technology. New equipment is not interchangeable with the old one, and partial installation is not allowed: embodiment of this modification implies the replacement of the two lights (belly fairing and rudder lights). This evolution of technology is applicable both on aircraft equipped with white or red anti-collision lights.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Maintenance and operational gains

- Long life span
- Reduced maintenance costs
- Low power consumption

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

SEE ALSO

- Navigation Lights With LED Technology
- Strobe Lights With LED Technology
- Anti-collision Light Protection

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- Equipment supply

WEIGHT CHANGE

+ 0.2 kg (+0.44 lb)

PRICE RANGE

From 10,000 USD

ESTIMATED LEAD TIME

2 months

ESTIMATED MANPOWER

5 hours

Subject to a possible specific adaptation to the relevant MSN.

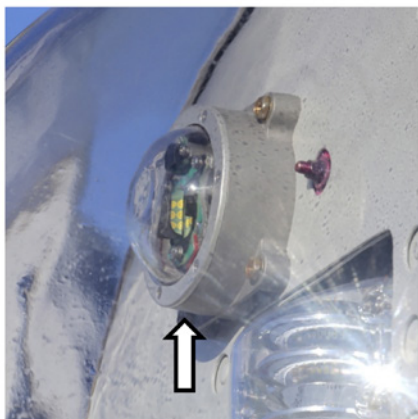
NAVIGATION LIGHTS WITH LED TECHNOLOGY

DESCRIPTION

The evolution consists in replacing the current navigation light equipment by new equipment using LED technology.
It concerns the three navigation lights: LH and RH wings and tail cone.
Only equipment replacement is required (no electrical or mechanical adaptation needed).
Mixability between old and new lights is not allowed.



Wing navigation light



Tail cone navigation light

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Maintenance and operational gains

- Long life span
- Reduced maintenance costs
- Low power consumption



OPERATIONAL
COSTS SAVINGS



MAINTENANCE
COSTS SAVINGS



OPERATIONAL
BOOST

-



PASSENGER
COMFORT

-



CREW
EFFICIENCY

-

SEE ALSO

- ↳ Anti-collision Lights With LED Technology
- ↳ Strobe Lights With LED Technology

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Equipment supply

WEIGHT CHANGE

None

\$ PRICE RANGE

From 3,000 USD

🕒 ESTIMATED LEAD TIME

2 months

👤 ESTIMATED MANPOWER

4 hours

Subject to a possible specific adaptation to the relevant MSN.

STROBE LIGHTS

WITH LED TECHNOLOGY

DESCRIPTION

The evolution consists in replacing the current strobe light equipment (Power Supply Units and lights) by new equipment using LED technology. It concerns the three strobe lights: LH and RH wings and tail cone. Old and new equipment are not interchangeable and not mixable.



Wing strobe light



Tail cone strobe light

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Maintenance and operational gains

- Long life span
- Reduced maintenance costs
- Low power consumption

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

SEE ALSO

- ✚ Anti-collision Lights With LED Technology
- ✚ Navigation Lights With LED Technology

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- Equipment supply

WEIGHT CHANGE

- 1.6 kg (- 3.5 lb)

PRICE RANGE

From 12,000 USD

ESTIMATED LEAD TIME

2 months

ESTIMATED MANPOWER

9 hours

Subject to a possible specific adaptation to the relevant MSN.

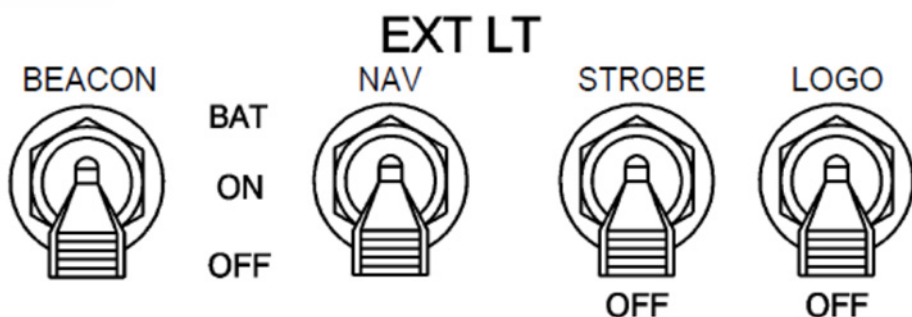
ANTI-COLLISION AND NAVIGATION

LIGHTS POWERED ON BATTERY ON GROUND

DESCRIPTION

This modification allows the powering of 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Aircraft equipped with LED anti-collision and navigation lights			

BENEFITS

- Answer to particular airport regulations that may require to turn-on the NAV 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

-

SEE ALSO

Anti-collision Lights With LED Technology

Navigation Lights With LED Technology

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply

WEIGHT CHANGE

+ 0.565 kg (+ 1.246 lb)

PRICE RANGE

From 11,000 USD

ESTIMATED LEAD TIME

3 months

ESTIMATED MANPOWER

50 hours

Subject to a possible specific adaptation to the relevant MSN.

EMERGENCY LIGHTING

INSTALLATION OF LED TECHNOLOGY AND PICTOGRAMS

DESCRIPTION

This modification replaces 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-212A	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	YES
PRE-REQUISITE		Armonia Cabin			

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
-	✓	-	-	-

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- Equipment supply

WEIGHT CHANGE

- 0.325 kg (- 0.716 lb)

PRICE RANGE

From 20,000 USD

ESTIMATED LEAD TIME

3 months

ESTIMATED MANPOWER

24 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in installing 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Depending on aircraft configuration			

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

-

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation
- Kit supply
- Equipment supply: ADF2 antenna, ADF2 receiver, ADF control unit

WEIGHT CHANGE

+ 4 kg (+ 8.8 lb)

PRICE RANGE

From 35,000 USD equipment included

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

Legacy Avionics: 280 hours
New Avionics Suite: 70 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The modification consists in installing a second radio altimeter 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 Captain side and Radio Height sent by radio Altimeter 2 is displayed on First Officer side.

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



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

- Compliance with Local Regulatory Requirements
- Backup equipment



OPERATIONAL
COSTS SAVINGS

-



MAINTENANCE
COSTS SAVINGS

-



OPERATIONAL
BOOST

-



PASSENGER
COMFORT

-



CREW
EFFICIENCY

-

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation
- Kit supply
- Equipment supply:
 - 2 RA2 antennas
 - RA2 transceiver

WEIGHT CHANGE

+ 4.9 kg (+ 10.8 lb)

\$ PRICE RANGE

From 60,000 USD equipment included

🕒 ESTIMATED LEAD TIME

5 months

👤 ESTIMATED MANPOWER

40 hours

Subject to a possible specific adaptation to the relevant MSN.

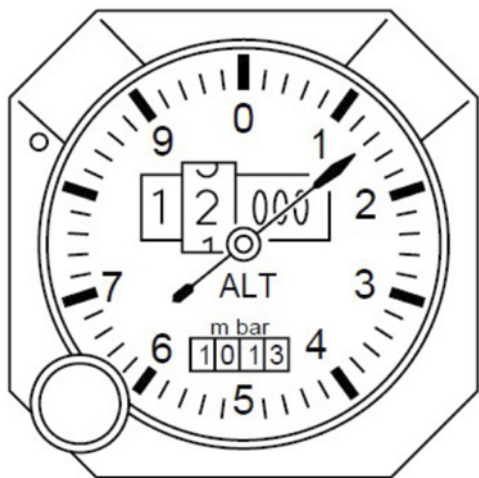
STANDBY ALTIMETER

MILLIBARS/INCHES OF MERCURY INDICATION

DESCRIPTION

This modification consists in replacing 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	Not applicable	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

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

SEE ALSO

 Fuel Equipment - Lb/Kg Indication

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Equipment supply

WEIGHT CHANGE

None

PRICE RANGE

From 12,000 USD

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

STEEP SLOPE APPROACH

CAPABILITY

DESCRIPTION

The steep slope approach capability allows operations on airports surrounded by high obstacles (mountain airports or downtown airports).

The principle consists in using special vertical guidance laws for the autopilot and avoiding 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Aircraft equipped with MKVII EGPWS minimum			

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
-	-	✓	-	-

SEE ALSO

- Take-off at RTO (100% power)

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- From NAS A/C: Equipment supply

WEIGHT CHANGE

< 1kg (2,2 lb)

PRICE RANGE

NAS A/C: from 50,000 USD
Legacy A/C: from 10,000 USD

ESTIMATED LEAD TIME

3 months

ESTIMATED MANPOWER

15 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The evolution consists in the replacement of weather radar PRIMUS 800 with radar PRIMUS 660 type.

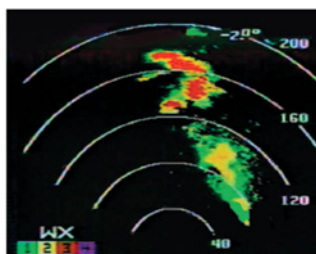
This new radar offers superior weather detection thanks to:

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

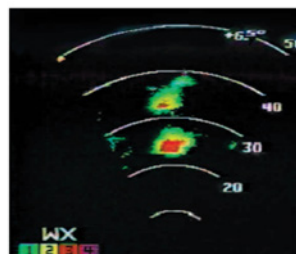
New outstanding proposed options are:

- 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 (EHSI).



Weather Detection



Sector Scan

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	(already equipped)	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Enhanced pilot performance

- Improved decision making due to better performance of radar system

Maintenance gains

- 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
-	✓	-	-	✓

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- Equipment

WEIGHT CHANGE

-6 kg (-13 lb)

\$ PRICE RANGE

From 80,000 USD

🕒 ESTIMATED LEAD TIME

3 months

👥 ESTIMATED MANPOWER

40 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The accomplishment of this modification allows validating 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Refer to ETOPS CMP document available on the ATR@ctive portal			

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
-	-	✓	-	-

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational Documentation

WEIGHT CHANGE

None

PRICE RANGE

From 5,000 USD

ESTIMATED LEAD TIME

5 weeks

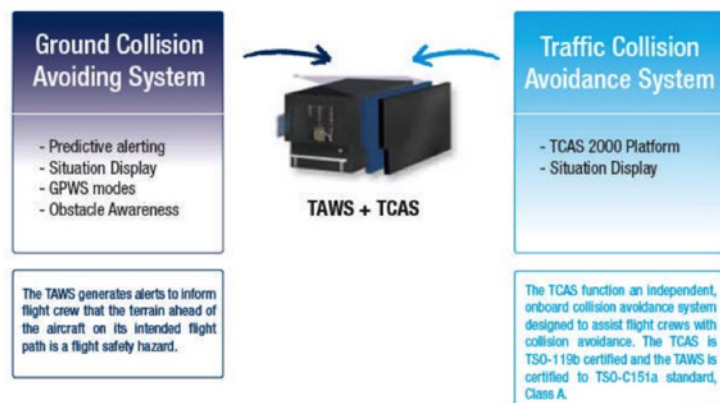
ESTIMATED MANPOWER

None

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This upgrade solution proposes the installation of Terrain and Traffic Collision Avoidance System (T²CAS) version 7.1. T²CAS computer combines both TAWS (Terrain Awareness Warning System) and TCAS (Traffic alert and Collision Avoidance System) functions into a single unit. The result is a space, weight and power consumption savings, and reinforced situational awareness through greater conflict anticipation and an efficient generation of alarms.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	YES	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO

PRE-REQUISITE

HT1000 GNSS (for Legacy Avionics aircraft),
Rockwell Collins Avionic Suite

SEE ALSO

NONE

BENEFITS

Enhanced pilot performance

- Reinforced situational awareness through greater conflict anticipation and a systematically efficient generation of alarms

Operational gains

- Space, weight and power consumption savings when comparing with using a double LRU system

Maintenance gains

- Lower maintenance actions when comparing with using TCAS and TAWS individual computers

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

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation
- Kit supply
- Equipment supply: Directional T²CAS antenna, Omni T²CAS antenna, T²CAS transmitter receiver, APM, Compact flash card APM files ASDB, Compact flash card APM files ACD

WEIGHT CHANGE

- 3.3 kg (- 7.3 lb)

PRICE RANGE

From 265,000 USD for T²CAS installation equipment included

ESTIMATED LEAD TIME

5 months

ESTIMATED MANPOWER

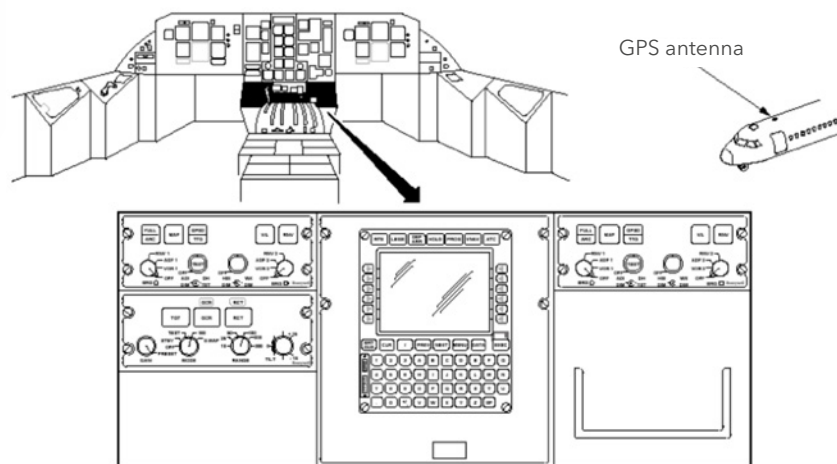
120 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The modification consists in installing 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-300/42-320/42-400/42-500	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Depending on aircraft configuration			

BENEFITS

Operational gains

- 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
✓	-	-	-	-

SEE ALSO

RNP Approach With GNSS

T²CAS Installation

P-RNAV With GNSS

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation
- Kit supply
- Equipment supply (not included): Control panel-EFIS, Antenna-GNSS, MCDU, NPU

WEIGHT CHANGE

+ 6.8 kg (+ 15.1 lb)

PRICE RANGE

From 60,000 USD equipment not included

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

7 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in providing conformity between GNSS and TGL 10 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		GNSS HT1000			

BENEFITS

Compliance with European requirements

Operational gains

- 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

-

SEE ALSO

 RNP Approach With GNSS

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational Publications

WEIGHT CHANGE

None

PRICE RANGE

Free Of Charge

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

None

Subject to a possible specific adaptation to the relevant MSN.

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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Certification of GNSS P-RNAV			

BENEFITS

Compliance with European requirements

Operational gains

- 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

-

SEE ALSO

Single HT1000 GNSS Installation

P-RNAV With GNSS

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational Publications

WEIGHT CHANGE

None

PRICE RANGE

Free of charge

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

None

Subject to a possible specific adaptation to the relevant MSN.

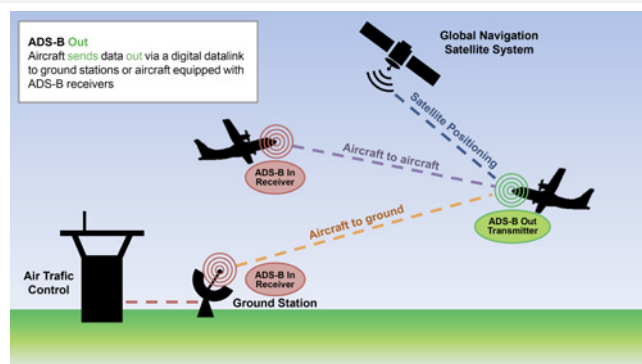
DESCRIPTION

This modification consists in activating 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 CDTI
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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		New Avionics Suite			

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
✓	-	-	-	✓

SEE ALSO

- ↳ ADS-B OUT DO-260A
- ↳ ADS-B OUT DO-260B for ATR -600 Series

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications

WEIGHT CHANGE

None

PRICE RANGE

From 8,000 USD equipment not included

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

None

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in activating 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 HFOM and VFOM
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 by the ATR Engineering Department.



AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		ATC mode-S transponder with ADS-B capability			

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
✓	-	-	-	✓

SEE ALSO

-  ADS-B OUT DO-260
-  ADS-B OUT DO-260B for ATR -600 Series

PACKAGE CONTENT

- SB Validation & Supply
- Kit supply
- Updating of Technical Publications

WEIGHT CHANGE

None

PRICE RANGE

From 6,000 USD

ESTIMATED LEAD TIME

2 months

ESTIMATED MANPOWER

4 hours

Subject to a possible specific adaptation to the relevant MSN.

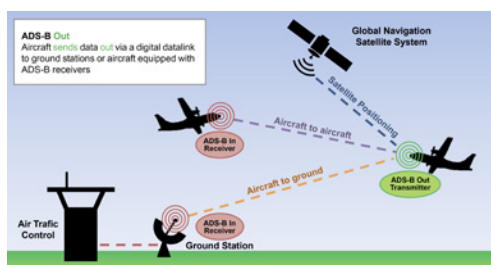
ADS-B OUT DO-260B FOR ATR PRE-NAS SERIES

DESCRIPTION

This modification consists in installing the Automatically 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 Upgraded Surveillance option is provided through:

- 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO

PRE-REQUISITE

MPC (Multi-purpose computer)

SEE ALSO

- ADS-B OUT DO-260
- ADS-B OUT DO-260A
- ADS-B OUT DO-260B for ATR -600 Series

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
- All pre-NAS models are addressed by ATR Upgrade solution
- Up-to-date technology Transponders (NXT -600) and GPS (NXT-900)
- Updated OEM Maintenance and Operational documentation
- All equipment are supplied in factory new conditions with 48 month warranty period
- Will benefit from the 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



PACKAGE CONTENT

- SB Validation & Supply
- Kit supply
- Equipment supply
- Updating of Technical publications

WEIGHT CHANGE

NONE

\$ PRICE RANGE

From 140,000 USD

🕒 ESTIMATED LEAD TIME

4 months

👥 ESTIMATED MANPOWER

120 hours

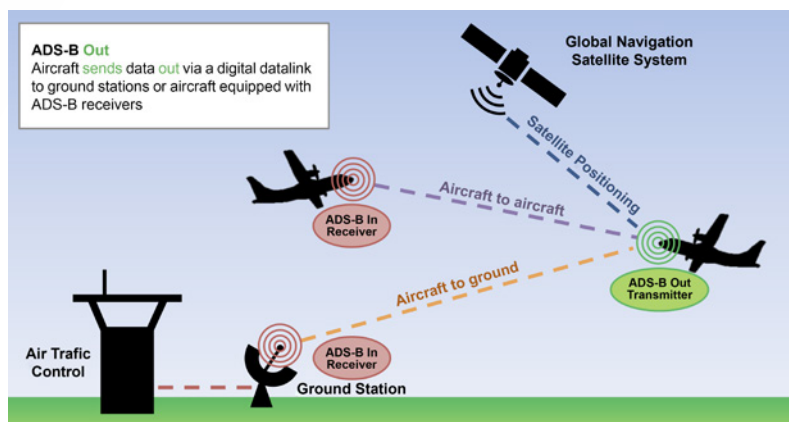
Subject to a possible specific adaptation to the relevant MSN.

ADS-B OUT DO-260B

FOR ATR -600 SERIES

DESCRIPTION

The modification consists in installing the Automatically 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 in the avionics suite the ACSS Transponders type NXT (P/N 9006000-55000).



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	Not yet available	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO

PRE-REQUISITE

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

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
✓	-	-	-	✓

SEE ALSO

- ➔ ADS-B OUT DO-260
- ➔ ADS-B OUT DO-260A

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- Equipment supply

WEIGHT CHANGE

+ 0.5 kg (+ 1.1 lb)

\$ PRICE RANGE

From 140,000 USD

🕒 ESTIMATED LEAD TIME

2 months

👥 ESTIMATED MANPOWER

30 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in the installation of second GPS SBAS receiver, with the following capacities:

- B-RNAV (RNP 5) for en-route phase
- P-RNAV (RNP 1) for terminal area
- RNP APPCH 0.3
- Advisory VNAV (data displayed on MCDU and MFD)
- 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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		SBAS GPS1			

BENEFITS

- Improved navigation capability

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

SEE ALSO

- ✚ VNAV Function Activation
- ✚ ADS-B OUT DO-260B for ATR -600 Series

PACKAGE CONTENT

- SB Validation & Supply
- Kit Supply
- Updating of Technical Publications
- Equipment supply (included):
 - GPS receiver
 - GPS antenna

WEIGHT CHANGE

+ 2.9 kg (+ 6.4 lb)

PRICE RANGE

From 40,000 USD equipment included

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	Not applicable	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO

PRE-REQUISITE

- NAS Standard 2 or higher.
- MPC DMU software P/N L04451-1004 and FDAU software P/N L04450-1001
- FGCP equipped with VNAV push-button

BENEFITS

- Improve flight safety (Controlled Flight Into Terrain reduction)
- Alleviate crew workload
- Optimize flight plan

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

SEE ALSO

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

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Updating of NAS option configuration file

WEIGHT CHANGE

None

\$ PRICE RANGE

From 20,000 USD

🕒 ESTIMATED LEAD TIME

6 weeks

👤 ESTIMATED MANPOWER

1 hour

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

LPV (Localizer Performance with Vertical guidance) 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	Not applicable	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		<ul style="list-style-type: none"> NAS Standard 2 or higher MPC DMU software P/N L04451-1004 and FDAU software P/N L04450-1001 Dual GPS SBAS connected to CAC 			

BENEFITS

- Improve approach capability
- Light training: reduced cost for 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
-	-	✓	-	-

SEE ALSO

VNAV Function Activation

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Updating of NAS option configuration file

WEIGHT CHANGE

None

PRICE RANGE

From 100,000 USD

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	Not applicable	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO

PRE-REQUISITE

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

BENEFITS

- Improve 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



SEE ALSO

 RNP AR 0.3/0.3 Capability

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- Updating of NAS option configuration file

WEIGHT CHANGE

None

PRICE RANGE

From 180,000 USD

ESTIMATED LEAD TIME

5 weeks

ESTIMATED MANPOWER

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)



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	Not applicable	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO

PRE-REQUISITE

- 2nd GPS SBAS
- Electronic check lists V21 or upper
- ASDB and ACD files updated to P/N 9200000-04302 and 9200001-06803
- NAS Standard 3

BENEFITS

- Improve 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
✓	-	✓	-	✓

SEE ALSO

- Enhanced NAS Software Standard 3
- RNP AR 0.3/1 Capability

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- Equipment supply
- Updating of NAS option configuration file

WEIGHT CHANGE

+13.3 kg (+29.5 lb)

PRICE RANGE

From 550,000 USD

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

100 hours

Subject to a possible specific adaptation to the relevant MSN.

ELECTRONIC FLIGHT BAG (EFB)

CLASS II – IPAD CAPABILITY

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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	YES	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

SEE ALSO

NONE

BENEFITS

Enhanced pilot performance

- 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

Operational gains

- Appreciable 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
✓	-	-	-	✓

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Maintenance Publications
- Kit Supply
- Equipment supply :
Cradle mounting assembly

WEIGHT CHANGE

+ 2.8 kg (+ 6.4 lb)

PRICE RANGE

From 15,000 USD cradles included. The iPad tablet is not supplied by ATR

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

20 hours

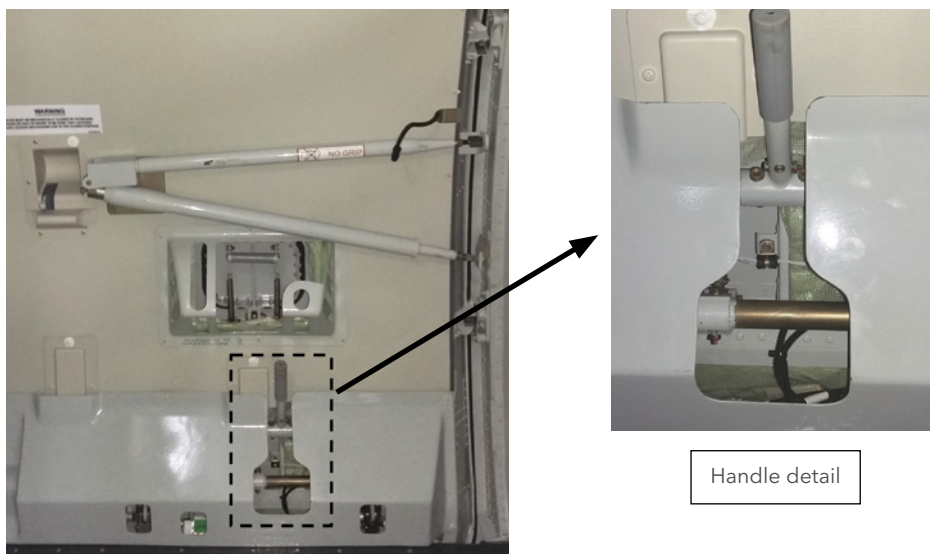
Subject to a possible specific adaptation to the relevant MSN.

CARGO DOOR

INTERNAL OPENING MECHANISM

DESCRIPTION

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



Internal opening mechanism

Handle detail

APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	72-102 / 72-202 / 72-212 / 72-212A	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

- Facilitates the egress of crew in cargo transportation aircraft.

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply

WEIGHT CHANGE

+ 1.2 kg (+ 2.7 lb)

PRICE RANGE

From 16,000 USD

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

80 hours

Subject to a possible specific adaptation to the relevant MSN.

PAX/CREW DOOR

COUNTERBALANCE SYSTEM IMPROVEMENT

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 (CRES) 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 by new ones with increased diameter

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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Maintenance gains

- Increased reliability
- Simplified maintenance

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

SEE ALSO

NONE

PACKAGE CONTENT

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

WEIGHT CHANGE

Variable

PRICE RANGE

From 3,000 USD

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

Variable

Subject to a possible specific adaptation to the relevant MSN.

FUSELAGE PROTECTIONS FOR UNPAVED RUNWAYS

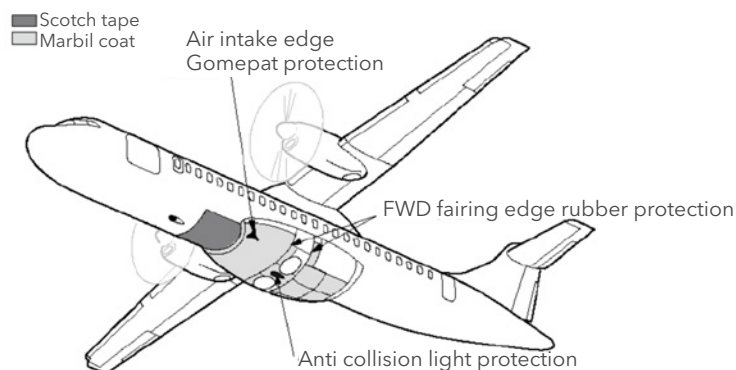
DESCRIPTION

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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

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
-	✓	✓	-	-

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply
- Marbill coating is not included

WEIGHT CHANGE

+ 52 kg (+ 115 lb)

PRICE RANGE

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

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

From 8 to 80 hours depending on aircraft configuration and selected protection level

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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-300 / 42-320 / 42-400 / 42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

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
-	✓	-	-	-

SEE ALSO

- Fuselage Protections for Unpaved Runways
- Anti-collision Lights With LED Technology

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical publications
- Kit supply

WEIGHT CHANGE

+ 1.5 kg (+ 3.3 lb)

PRICE RANGE

From 7,500 USD

ESTIMATED LEAD TIME

2 months

ESTIMATED MANPOWER

10 hours

Subject to a possible specific adaptation to the relevant MSN.

AILERON SPRING TABS

RELOCATION OF DRAINING HOLES TO AVOID CORROSION

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 by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-200/42-300/42-320/42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-102/72-202/72-212/72-212A	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Maintenance gains

- Increased corrosion resistance



OPERATIONAL
COSTS SAVINGS

-



MAINTENANCE
COSTS SAVINGS



OPERATIONAL
BOOST

-



PASSENGER
COMFORT

-



CREW
EFFICIENCY

-

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications
- Kit supply

WEIGHT CHANGE

None

PRICE RANGE

From 3,000 USD

ESTIMATED LEAD TIME

5 months

ESTIMATED MANPOWER

100 hours

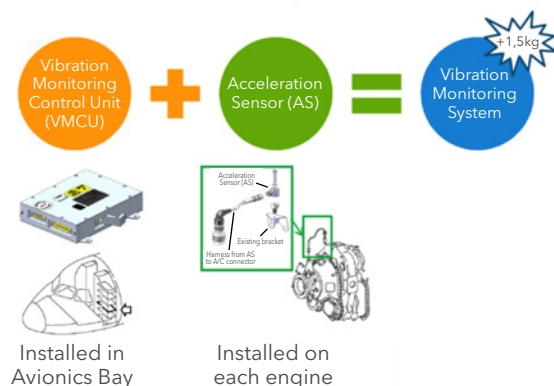
Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

The modification consists in installing 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	ALL	Legacy avionics	NO	Original cabin	NO
ATR 72	ALL	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		NONE			

BENEFITS

Optimize maintenance planning

- Avoid unnecessary balancing tasks
- Automated monitoring and solution computation

Reduce maintenance costs

- Increased reliability of engine mounted components
- Reduced maintenance manhours

Enhance passenger comfort

Balancing solution computation

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

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Documentation

WEIGHT CHANGE

None

PRICE RANGE

From 17,000 USD

ESTIMATED LEAD TIME

3 months

ESTIMATED MANPOWER

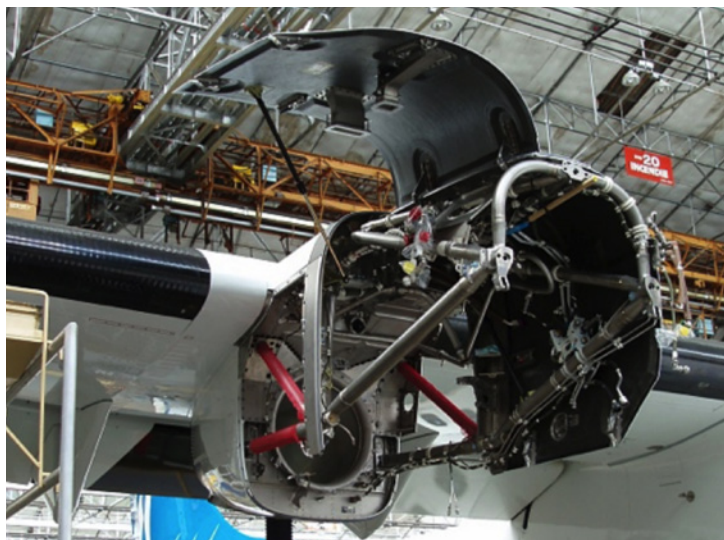
40 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This upgrade solution consists in installing 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 Service Bulletin P&WC N° PW100-72-21763.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-212A	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		Depending on each aircraft configuration. Please contact us.			

BENEFITS

Maintenance gains

- 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

-

SEE ALSO

NONE

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications
- Kit Supply

WEIGHT CHANGE

None

PRICE RANGE

From 5,000 USD

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

30 hours

Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This retrofit solution proposes to convert a PW127E or PW127F engine to 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 only)

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



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	42-500	Legacy avionics	NO	Original cabin	NO
ATR 72	72-212A	New avionics suite	NO	New-look cabin	NO
				Armonia cabin	NO

PRE-REQUISITE	<ul style="list-style-type: none"> • Universal Engine harness • Other pre-requisites are possible depending on your aircraft configuration; please contact us.
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BENEFITS

Maintenance gains

- 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
-	✓	✓	-	-

SEE ALSO

- ✎ Take-off at RTO (100% power)
- ✎ Boost Function
- ✎ Universal Engine Harness

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Technical Publications
- Kit supply
- SB P&WC (not included)

WEIGHT CHANGE

Negligible (< 1kg (2.2 lb))

PRICE RANGE

From 3,000 USD

ESTIMATED LEAD TIME

3 months

ESTIMATED MANPOWER

10 hours

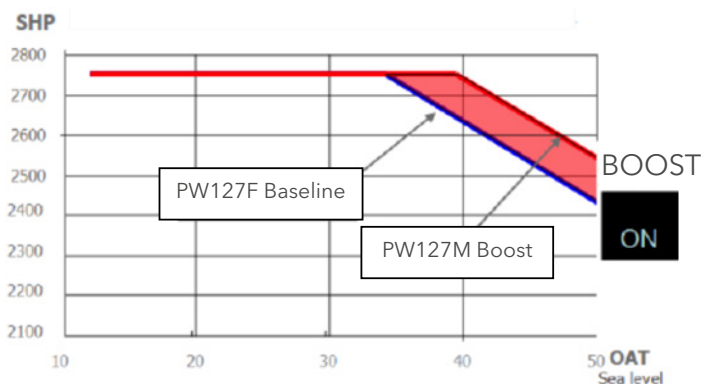
Subject to a possible specific adaptation to the relevant MSN.

DESCRIPTION

This modification consists in installing Boost function. 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.



APPLICABILITY

For information only. Applicability of the modification to each MSN is subject to validation by the ATR Engineering Department.

AIRCRAFT MODELS		AVIONICS		CABIN	
ATR 42	NONE	Legacy avionics	YES	Original cabin	NO
ATR 72	72-212A	New avionics suite	YES	New-look cabin	NO
				Armonia cabin	NO
PRE-REQUISITE		<ul style="list-style-type: none"> PW127M Engine FDAU P/N ED34A350 			

BENEFITS

Operational gains

- 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

-

SEE ALSO

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

PACKAGE CONTENT

- SB Validation & Supply
- Updating of Operational and Maintenance Documentation
- Kit supply
- Equipment supply

WEIGHT CHANGE

+ 1.5 kg (+ 3.3 lb)

PRICE RANGE

From 35,000 USD equipment included

ESTIMATED LEAD TIME

4 months

ESTIMATED MANPOWER

120 hours

Subject to a possible specific adaptation to the relevant MSN.

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