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WISE article EngOps-16241

SUBJECT: **AIRCRAFT SECURITY**
Cockpit Door Locking System open issues

ATA CHAPTER: 2520 & 5251

AIRCRAFT TYPE: A300 / A300-600 / A310 / A318 / A319 / A320 / A321 / A330 / A340

APPLICABILITY: ALL

REFERENCES:

OIT/FOT Ref. SE 999.0098/03/FM	Dated 27-AUG-03
OIT/FOT Ref. SE 999.0116/03/FM	Dated 23-SEP-03
OIT/FOT Ref. SE 999.0122/03/FM, Rev 2	Dated 16-DEC-03
"Aircraft Security" folder in AOLS (FTP Site / AIRCRAFT SECURITY)	
SIL 25-129	Dated 29-OCT-03
SIL 25-129 rev 01	Dated 22-DEC-03
SIL 25-129 rev 02	Dated 16-MAR-04
SIL 25-129 rev 03	Dated 28-MAY-04
SIL 25-132 rev 01	Dated 08-DEC-04
SIL 52-061	Dated 10-SEP-04

1. PURPOSE:

This WISE article provides the Airbus operators with a status on the Cockpit Door Locking System (CDLS) open in-service technical issues, for all Airbus aircraft types.

2. BACKGROUND:

Airbus has previously provided operators with updates on all open in-service items related to the reinforced cockpit door modification through the Operator Information Telex (OIT) and Flight Operations Telex (FOT) channels. The last most significant updates prior to the commencement of SIL 25-129 are referenced below and can be found in the "Aircraft Security" AOLS folder.

- OIT/FOT SE 999.0098/03/FM dated 27-AUG-03 informs operators of the technical details of the A300/A300-600/A310 aircraft and A330/A340 enhanced Cockpit Door Locking System (CDLS) reliability improvements.

- OIT/FOT SE 999.0116/03/FM dated 23-SEP-03 provides operators with a general update on all technical in-service items and also provide details on systems requests for clarification from some operators.

- OIT/FOT SE 999.0122/03/FM, Rev 2, dated 16-DEC-03 updates operators on the availability of the A300/A300-600/A310 and A330/A340 enhanced Cockpit Door Locking System reliability improvements.

This WISE article is used to provide operators with background items related to the reinforced cockpit door modification.

3. DESCRIPTION:

You will find below a table of contents, listing in-service technical issues related to the Cockpit Door Locking System (CDLS). For each item, the "Summary" paragraph describes the issue, and the "Status" paragraph provides a follow-up on the action launched.

4. AIRBUS ACTION:

All Airbus Aircraft - CDLS Open Issues

2.1 FAULT Light Illumination During Emergency Access

Summary:

When the door controller commands opening of the door following input of the emergency access code, the door controller will also see that the door has not been commanded open by the toggle switch. Thus the FAULT light will be illuminated for the time during which the solenoids are not energised during an emergency access request (5 seconds).

Status: (CLOSED)

A modification has been made to the door controller software to eliminate FAULT light illumination during an emergency access request. The opportunity was also taken to suppress filters installed on early standard control units. These changes are considered as product improvements and therefore replacement of the earlier door controllers is not required. With this change the door controller part number evolves from PN AR4709-1 to PN AR4709-3.

On A300/A310 aircraft, the new controller PN AR4709-3 is introduced in production through MOD 12658; on A330/A340 aircraft in production through MOD 51118 from MSN 527 onwards; and on A318/A319/A320/A321 aircraft in production through MOD 33037 from A318 MSN 1939, A319 MSN 1952, A320 MSN 1983 and A321 MSN 1946 onwards.

For in-service aircraft, the IPC has been revised to reflect PN AR4709-3 as a preferred spare part.

2.2 Toggle Switch Sticking

Summary:

Airbus has received reports that the CDLS toggle switch has been found to "stick" in the unlock position.

Status: (CLOSED)

This issue is dealt with in Airbus SIL 25-132 (WISE article Eng-Ops16085). Please refer to WISE article Eng-Ops16085 for details.

2.3 EMI Susceptibility

Summary:

Some operators have requested Airbus to confirm the effect of EMI on the cockpit door locking system components.

Status: (CLOSED)

Airbus has conducted an investigation to reconfirm the compliance of the cockpit door locking system with EMI generated by portable electronic devices.

Dedicated testing carried out by Airbus and Adams Rite Aerospace has indicated a number of modifications to enhance the EMI protection level on A330/A340 aircraft. A320 Family aircraft and A300/A310 aircraft are not affected by these modifications due to their different configuration.

As a result of the above, SB's A330-52-3070, A340-52-4080 and A340-52-5004 have been released in April 04.

This modification consists of the following changes;
- replacement of the current door control unit connectors with filtered connectors;
- grounding of the shielding of the cables supplying the three strike assemblies;
- modification of the internal door control unit circuit;
- electrical bonding of the controller face plate.

2.4 Door Controller Resetting

Summary:

Airbus has received a report of door controller uncommanded resetting to the default factory values.

Status: (CLOSED)

Following examination of the suspect door controller by the supplier Adams Rite Aerospace, the unit was deemed to be fully functional (No Fault Found) and the resetting of the unit could not be confirmed (airline codes still stored). Additional Airbus testing on the Airbus production lines could also not repeat the reported event. No further action is therefore planned at this time.

2.5 Door Bolting System Covers

Summary:

The plastic covers installed over the door bolting system on all programs have experienced various types of damage in-service.

Status: (CLOSED)

Adams Rite Aerospace and Airbus have defined improvements to the current design. The new covers are reinforced with aluminium along the internal walls and at the connection with the latch/bolt assembly mounting points. A single mounting point is also added to stabilise the mid section of the cover and a grommet/lip seal along the free edges provides edge protection and reduced noise. Pan head screws are used to secure the covers in place.

The new covers have been introduced on A300/A310 family aircraft and A330/A340 family aircraft as part of the enhanced cockpit door locking system reliability improvement.

Please refer to item 6.1 for further details on MOD's and SB's.

For the installation of the reinforced covers on A320 Family in-service aircraft, ARA VSB AR4706-25-03 is available since the first quarter of 2005.

2.6 Sharp Edges on Latch Bolts

Summary:

In some cases the edges of the door bolting system bolts have been found to be too sharp.

Status: (CLOSED)

The vendor Adams Rite Aerospace have reviewed this issue and released Vendor Service Information Letter AR4706-25-02, drawing operator attention to new door rework procedures included in the door bolting system CMM 25-20-19. The Vendor Service Information Letter and updated CMM 25-20-19 are available on the Airbus AOLS FTP site or directly from Adams Rite Aerospace at the address below (item 2.7)

2.7 Adams Rite Aerospace Component CMM's

Summary:

ARA have committed to producing new dedicated CMM's for the CDLS components.

Status: (CLOSED)

ARA vendor CMM's are now available directly from Adams Rite Aerospace:

- PN AR4708 - A300/A310/A330/A340 door strike (25-20-20)
- PN AR4715 - Centre latch (25-20-23)
- PN AR4710 - Keypad assembly (25-20-27)
- PN AR4706 - Door bolting system (25-20-19)
- PN AR4714 - A320 door strike (25-20-22)
- PN AR4709 - Door controller (25-20-26)
- PN AR4764 - C/B Box (25-20-34)

Further details on Vendor CMM and SB distribution can be obtained from Adams Rite Aerospace as follows;

Ms. Angie Reyes
Tel +1-714-278-6622
areyes@ar-aero.com

2.8 Deadbolt Installation

Summary:

A number of operators have expressed their interest in the installation of a deadbolt as a back-up mechanical locking device.

Status: (CLOSED)

The JAA have reviewed their position regarding the installation of deadbolts on European-certified aircraft and have now made it known that they may consider certain types of deadbolts depending on the deadbolt design characteristics. As a result, Airbus has defined deadbolt solutions for each aircraft family.

As the deadbolt is considered an option and will not be offered as a standard modification, concerned operators are asked to contact Airbus Upgrade Services Front Desk at upgrade.services@airbus.com for further details or to follow the RFC/RMO procedure through their Customer Support Director.

2.9 Door Magnet

Summary:

The cockpit door magnet is not strong enough to maintain the weight of the new door on the ground following an increase in door weight from approximately 11kg to 35kg.

Status: (CLOSED)

Airbus has increased the magnet strength from 10daN to 20daN, for ground use only.

On A320 family aircraft, the new magnet was introduced in production through MOD 33037 from A318 MSN 1939, A319 MSN 2000, A320 MSN 2048 and A321 MSN 2005 onwards. For in-service aircraft, SB A320-25-1324 was issued in June 03.

On A330/A340 family aircraft, the new magnet was introduced in production through MOD's 51107/51380 depending on the aircraft version. For in-service aircraft, SB's A330-25-3193/A340-25-4204/A340-25-5020 were issued in November 03.

On A310/A300-600 short cockpit aircraft, the new magnet was introduced in production through MOD 12674 depending on the aircraft version. For in-service aircraft, SB's A310-25-2164 and A300-25-6183 were issued 10th March 2004.

On A300/A310/A300-600 long cockpit aircraft, SB's A300-25-0478, A310-25-2170 and A300-600-25-6189 were issued 5th April 2004.

2.10 Strike Deactivation Procedure

Summary:

In order to allow aircraft dispatch with all possible failure modes of the A300/A310/A330/A340 strike PN AR4708 and A320 Family strike PN AR4714, a deactivation procedure has been created for each part number.

Status: (CLOSED)

The strike deactivation procedure has been included in A330/A340 AMM (task 52-51-00-040-812) from Jan/04 onwards and in A320 Family AMM (task 52-51-00-040-010) from Feb/04 onwards, and will be included in A300/A310 AMM (52-51-00 Page Block 901) from Jun/04 onwards.

2.11 Door Upper Edge Damage due to contact with forward area Dimmer Switch

Summary:

Airbus is aware of the possibility of damage to the upper lip of the cockpit door profile due to contact with the upper header light dimming switch.

Status: (CLOSED)

Airbus has developed a permanent repair, which consists of a thin steel plate bonded over the damaged area on the upper edge of the cockpit door.

This repair procedure was included in the AMM in the February 2005 revision for A320 Family aircraft, in the January 2005 revision for A330/A340 Family aircraft, and in the June 2005 revision for A300/A310 Family aircraft.

2.12 Attachment of Components to the Reinforced Cockpit Door

Summary:

Airbus has been requested by a number of operators to confirm the Airbus position regarding the attachment of parts to the reinforced cockpit door

Status: (CLOSED)

Due to Airworthiness Authorities requirements for a bullet proof Phase II cockpit door, it is not possible to attach rigid parts on the new Phase II door using inserts/screws or similar non-flexible attachments.

A direct impact of a projectile on a rigid part or its attachments can cause hazardous fragments that may break off and accelerate up to a velocity level where the fragment itself can be considered as a projectile. In addition, due to the need for the bullet proof S-glass to flex in order to absorb the energy transmitted following an impact anywhere on the door, an indirect impact may also lead to the fragmentation or detachment of items located on the cockpit side of the door. These conditions must also be taken into account during door opening in a rapid decompression. It should also be noted that aerodynamic calculations of door opening during rapid decompression have also been performed using a clean door at a specified weight value, due to the many different ancillary part configurations existing in the past. Thus the installation of custom ancillary components may affect the effectiveness of the door as a decompression path during a rapid decompression.

A note is to be added to the AMM CDLS System Description to reflect the above. This note has been included in AMM Section 52-51-00 Page Block 001 in the A330/A340 AMM from Apr/04, in the A320 Family AMM from May/04 onwards, was included in the A310/A300-600 AMM from June/04 onwards and in the A300B2/B4 AMM from Mar/05 onwards.

2.13 CDLS Controller Behaviour During Pressurisation Test

Summary:

Airbus has been requested by a number of operators to confirm the behaviour of the CDLS controller during an aircraft decompression test.

Status: (CLOSED)

The pressure sensors integrated in the control unit of the CDLS have an operating range from 0 to 15 psi. The control unit channel 1 & 2 LED's (and thus FAULT light) will illuminate during a pressurisation test when the ambient pressure in the cockpit reaches 16.7 psi or above. If this pressure is reached, the failure logic of the door controller will trigger a failure of both pressure channels and thus the 'FAULT' light will also be illuminated. After reducing the pressure to below 16.7 psi, the channel 1 & 2 LED's will extinguish, and the system is completely operational again without damage.

A note is to be added to the AMM CDLS System Description to reflect the above behaviour. This note was included in AMM Section 52-51-00 Page Block 001 in the A330/A340 AMM from Jul/04 onwards, in the A320 Family AMM from May/04 onwards, in the A310/A300-600 AMM from June/04 onwards and in the A300B2/B4 AMM from Mar/05 onwards.

2.14 Door Bolting System (DBS) Covers Part Numbers

Summary:

Airbus has been requested by a number of operators to confirm the part numbers of the Door Bolting System (DBS) covers installed on Airbus aircraft.

Status: (CLOSED)

A330/A340 aircraft;
- upper cover : PN 72515-1
- lower cover : PN 72515-2

Post SB A330-25-3215 / A340-25-4218 / A340-25-5047 Embodiment;
- upper cover : PN 72515-1 will be replaced by PN 72878-1 (one-way interchangeability)
- lower cover : PN 72515-2 will be replaced by PN 72878-2 (one-way interchangeability)

A318/A319/A320/A321 aircraft;
- upper cover : PN 72515-2
- lower cover : PN 72515-1

Post ARA VSB AR4706-25-03 Embodiment
- upper cover : PN 72515-2 will be replaced by PN 72878-2 (one-way interchangeability)
- lower cover : PN 72515-1 will be replaced by PN 72878-1 (one-way interchangeability)

A300/A310/A300-600 aircraft;
- upper cover : PN 72515-4
- lower cover : PN 72515-1

Post SB A300-25-6186 / A300-25-0476 / A310-25-2167 Embodiment;
- upper cover : PN 72515-4 will be replaced by PN 72878-4 (one-way interchangeability)
- lower cover : PN 72515-1 will be replaced by PN 72878-1 (one-way interchangeability)

For any further questions on the reflection of the above in the IPC, please contact Airbus Technical Publications.

A318/A319/A320/A321 Aircraft - CDLS Open Issues

3.1 Door Open Indication

Summary:

In certain conditions, the A318/A319/A320/A321 strike assembly rotating catch can ends up in a position forward of the solenoid plunger. In this case the door is closed but not locked and no "OPEN" indication exists.

Status: (CLOSED)

This condition is not possible if the procedure in the FCOM is adhered to. The FCOM states 'the switch must be pulled and maintained in the unlock position until the door is pushed open'.

A production improvement was however foreseen, installing a second micro switch in parallel with the existing switch on the centre strike, monitoring the position of the rotating catch. Final qualification testing and qualification is complete.

However, Airbus and Adams Rite investigations have revealed that overheating conditions might potentially lead to increased friction between the plunger and the push coil bobbin of the electric strikes PN AR4714-1/-3. Please refer to item 3.10 for details. As a consequence, Airbus and Adams Rite Aerospace have investigated on the possibility to install resettable devices to protect the strikes against overheating.

For further information on resettable device please refer to WISE article “Cockpit Door Locking System (CDLS) - Strikes PN AR4714-1--3 - Failure overheating” (ref eng-5250).

3.2 Solenoid Failure in Extended Position

Summary:

One operator has reported that it was not possible to open the cockpit door electrically, and it was necessary to use the D-ring handle to open and close the door. This condition was caused by the failure of one of the electrical strikes in the extended position.

Status: (CLOSED)

The cause of this failure has been linked with a manufacturing anomaly whereby insufficient epoxy was applied to hold the inner coils in place, thus resulting in off-centre relative actuation of the solenoid plunger. The manufacturer Adams Rite Aerospace have concluded that this was most likely an isolated case and no further cases have been reported. Therefore no further dedicated action is planned.

Airbus is however reviewing the MMEL in order to reflect the possibility of failure of a strike assembly with the plunger in the extended position.

A strike deactivation procedure has been created in order to address failures with strike jammed in the extended position. Availabilities and references of the related AMM tasks are provided by item 2.10 of this document.

The MMEL was updated to reflect this procedure as a dispatch condition at the next revision, planned for the 4th Quarter 2004. For further updates per program, please contact the relevant Airbus Customer Services STLM department.

3.3 Galley/120VU Door bumpers

Summary:

A review of SB's 25-1287 and 25-1305 has shown that early issues of these SB called for the removal and discarding of the two bumpers installed on the galley wall. However, from SB 25-1287R4 on and 25-1305 R2 on, the instruction to remove these bumpers and the associated figure have been deleted from both SB's. Leaving the bumpers in place can cause damage to the door bolting system covers. This issue has also been reported to affect production aircraft.

Status: (CLOSED)

It is confirmed that only one bumper should be placed opposite the centre latch assembly.

A solution has been defined for all in-service and production aircraft, involving the deletion of the lower bumper. This change has been included in MOD 33691, and was included in production from A318 MSN 2100 onwards, A319 MSN 2091 onwards, A320 MSN 2144 onwards, and A321 MSN 2105 onwards. For in-service aircraft, this change has been included in SB A320-25-1326, which was released on 28-JUN-2004.

3.4 Door Jamming In-flight and Door Upper Attachment Damage

Summary:

Airbus has received reports of A320 family door jamming in-flight due to relative movement between monuments. In parallel, some reports have been received of damage to the door upper attachment due to friction and wear and tear.

Status: (CLOSED)

A technical solution has been defined, consisting of a modified self-locking nut, a polyamide washer to reduce the frictional forces and a thicker attachment plate. A series of successful flight tests have been carried out to examine the full level of Z-direction movements as a result of structural deformation/monument movement; to validate the new attachment principle; and to validate the current A320 Family door rigging procedure.

This change is available through MOD 33691 for production aircraft, from A318 MSN 2100 onwards, A319 MSN 2091 onwards, A320 MSN 2144 onwards, and A321 MSN 2105 onwards. For in-service aircraft, this modification is available through SB A320-25-1326, which was released on 28-JUN-2004.

In the interim, the issue can be addressed through the A320 family door rigging procedure, where the door should be rigged upwards to counteract downward movement. Should the issue continue on a specific aircraft, inspection of the upper attachment nut is recommended. In addition, Airbus SIL 52-061 dated 10-SEP-2004 recommends to check and ensure the correct adjustment of the cockpit door as per AMM 25-00-00 page block 501 every 20 months. Please refer to SIL 52-061 for details.

3.5 Monitoring of CDLS C/B

Summary:

The current CDLS C/B on A318/A319/A320/A321 is not monitored and does not provide an indication to the crew should a C/B tripping occur.

Status: (CLOSED)

A solution has been defined which involves replacing the current 1MQ C/B with a monitored one. Monitoring will then be performed via the SDAC and ECAM.

This change is available through MOD 33765 for production aircraft, from A318 MSN 2218 onwards, A319 MSN 2198 onwards, A320 MSN 2178 onwards, and A321 MSN 2208 onwards. For in-service aircraft, this modification is available through SB A320-25-1326, which was released on 28-JUN-2004.

3.6 Door Opening on Landing

Summary:

Airbus has received reports of cockpit door opening immediately following aircraft touchdown.

Status: (CLOSED)

Airbus has conducted an investigation into the potential causes of the opening of the door on landing and has concluded that the door must not have been locked correctly before landing. The door controller is not affected by the different phases of flight nor do any rapid pressure variations exist specifically on touchdown. In addition, all of the components of the CDLS have passed their relevant vibration testing thus removing the possibility of door opening due to the force and shocks of a touchdown.

As a result of the above, no further action is planned at present. However Airbus would appreciate detailed data should an operator experience such a phenomenon in the future.

Operators are recommended to verify the correct functioning of the CDLS toggle switch should door opening on landing be encountered, ensuring the switch returns automatically to the NORM position when released from the UNLOCK position.

3.7 120VU/Galley Protection plates

Summary:

Airbus is aware that damage to the 120VU panel and galley wall can occur due to contact with the reinforced cockpit door hatch pip-pins when the door is opened.

Status: (CLOSED)

A solution has been defined which involves installing an enlarged protection plate on both the 120VU panel and the galley wall.

This change is available through MOD 33691 for production aircraft, from A318 MSN 2100 onwards, A319 MSN 2091 onwards, A320 MSN 2144 onwards, and A321 MSN 2105 onwards. For in-service aircraft, this modification is available through SB A320-25-1326, which was released on 28-JUN-2004.

3.8 A320 Family Door Rigging Procedure – 4mm Solenoid Housing Bull nose Modification

Summary:

As part of the A320 Family reinforced cockpit door rigging task, a 2mm modification of the solenoid housing bull nose is included to allow rigging in the X-direction.

In order however to allow further X-direction movement if required, a 4mm solenoid housing bull nose modification has been defined.

Status: (CLOSED)

The 2mm solenoid housing bull nose modification was covered via MOD 33626, however was performed on in-service and production aircraft only if required as a repair procedure.

The 4mm solenoid housing bull nose modification is covered via MOD 33268, and is included in production from A318 MSN 2035 onwards, A319 MSN 2033 onwards, A320 MSN 2049 onwards, and A321 MSN 2041 onwards. As experience to date indicates 4mm bull nose reduction is not required at present on the in-service fleet, no application on in-service aircraft is currently planned.

3.9 Rigging Procedure – Door Bolt Engagement Sequence

Summary:

As part of the A320 Family reinforced cockpit door rigging task, a number of operators have requested clarification regarding the engagement sequence of the three door bolts.

Status: (CLOSED)

It is required that the upper and lower latches are engaged before the centre latch during the door closing sequence. A note is already included to this effect in AMM Subtask 52-51-21-820-050, which details the adjustment of the latch mechanisms during latch installation. This is not included in AMM Subtask 52-51-00-820-052 (door rigging procedure) for adjustment of the latches post-installation.

A note is to be added to the AMM Rigging Procedure to reflect the above. This note has been included in A320 Family AMM from May/04 onwards

3.10 C/B Box introduction on A320 Family aircraft

Summary:

Some operators have requested that Airbus consider the introduction of a strike C/B box on A320 Family aircraft, similar to that introduced on A300/A310/A330/A340 aircraft.

Status: (CLOSED)

Airbus has initiated a study to review the possibility of the introduction of the C/B box on A320 Family aircraft.

Further to a number of in-service reports mentioning abnormally hot cockpit door strikes on A320 Family aircraft, Airbus and Adams Rite investigations have revealed that the reported overheating condition might degrade the electric strikes PN AR4714-1/-3.

The electric strikes PN AR4714-1/-3 feature a solenoid device consisting of a temporarily powered push coil that activates the plunger to lock the strike, and a permanently powered hold coil that holds the plunger in the extended position. The strikes PN AR4714-1/-3 also feature an internal thermal fuse that switches the power off the strike assembly in case the internal temperature reaches 128°C.

The push coil is winded on a Liquid Crystal Polymer (LCP) bobbin, which physical properties are

modified if the temperature exceeds 150°C. Due to the remote location of the internal thermal fuse, the push coil temperature might reach 150°C without tripping of the fuse. The push coil bobbin might then shrink on the plunger shaft, thus leading to potential increased friction between those two parts.

The introduction of the circuit breaker box may be considered as a potential solution to prevent the electric strikes PN AR4714-1/-3 from overheating. However, Airbus and Adams Rite Aerospace are currently investigating on alternative resettable devices, in order to assess the best means of protection against strike overheating. Operators will be kept informed accordingly of the outcome of these investigations by the first quarter of 2005.

For further information on resettable device please refer to WISE article “Cockpit Door Locking System (CDLS) - Strikes PN AR4714-1--3 - Failure overheating” (ref eng-5250).

A300/A310 Aircraft – CDLS Open Issues

4.1 Loss of Coat Stowage

Summary:

Some operators have expressed their concern with the loss of stowage following A300/A310 CDLS reinforced cockpit door service bulletin embodiment.

Status: (CLOSED)

An engineering investigation has been opened and a number of possibilities have been identified. However as the solution will need to be customised to each airline configuration, concerned operators are asked to contact Airbus Upgrade Services Front Desk at upgrade.services@airbus.com for further details or to follow the RFC/RMO procedure through their Customer Support Director.

4.2 Toggle Switch Location

Summary:

Some operators have expressed their concern regarding the location of the toggle switch on A300/A310 family aircraft.

Status: (CLOSED)

During the design phase for A300/A310 family aircraft, Airbus attempted to locate the toggle switch panel on the centre pedestal in a similar fashion to the installation on A320 family aircraft and A330/A340 family aircraft.

However, due to the many different custom layouts existing for A300/A310 family aircraft, it was not possible to find a common location for all operators, and given the imposed time constraints involved and the work associated with placing the toggle switch in a different location for each operator, it was decided to pick a common location in the overhead panel.

As a relocation/solution will need to be customised to each airline configuration, concerned operators are asked to contact Airbus Upgrade Services Front Desk at upgrade.services@airbus.com for further details or to follow the RFC/RMO procedure through their Customer Support Director.

4.3 Upper Header Height

Summary:

Some operators have expressed their concern regarding the low height of left-hand edge of the A300/A310 aircraft door header due to the incorporation of a chamfer on the door, required due to the new door opening geometry.

Status: (CLOSED)

Feedback from operators indicates several basic improvements exist, such as the installation of warning placards/decals or light padding.

As a solution will need to be customised to each airline configuration, concerned operators are asked to contact Airbus Upgrade Services Front Desk at upgrade.services@airbus.com for further details or to follow the RFC/RMO procedure through their Customer Support Director.

4.4 Door Rigging Procedure

Summary:

Airbus is in the process of creating a door rigging procedure for A300/A310/A300-600 aircraft.

Status: (CLOSED)

A technical review has been completed on in-service aircraft and the basis of the rigging procedure has been established. The basic rigging procedure has been incorporated in the MAR 2004 revision of the A300/A310/A300-600 AMM (52-51-11 Page Block 501).

4.5 Wiring Access Review

Summary:

A review of the routing of the wiring linked to the cockpit door locking system has been carried out in order to identify any areas of improvement.

Status: (CLOSED)

As a precautionary measure to prevent any possibility of access to the wiring from the cabin side. It has been decided to relocate the wiring potentially accessible from the cabin to the cockpit side of the door.

This solution has been made available for in-service aircraft via SB's A300-25-6185/A310-25-2166, issued in April 2004.

4.6 Electrical Strike Access

Summary:

Airbus is aware of the length of time required to gain access for removal/installation of the electrical strikes on A300/A310 family aircraft, which can take between 8-12 hours.

Status: (CLOSED)

An engineering investigation was performed in order to develop a new doorpost with better accessibility to the electrical strikes. The solution is available for in-service aircraft through SB's A300-25-6187 and A310-25-2168, released on 11-JUN-2004.

A330/A340 Family Aircraft - CDLS Open Issues

5.1 Noise Reduced CDLS

Summary:

Airbus has been requested by a number of operators to investigate the possibility of reducing the noise generated by the operation of the CDLS cockpit door locking system.

Status: (CLOSED)

In response to the above operator requests, Airbus has investigated in detail the noise levels generated by the cockpit door locking system, in particular on aircraft with a Flight Crew Rest Compartment (FCRC) installed adjacent to the cockpit door.

One clear conclusion has been that excessive noise levels can be caused by specific door rigging anomalies. Such anomalies can be addressed through the A330/A340 aircraft door rigging procedure included in the relevant A330/A340 aircraft AMM sections (Adjustment/Test). In addition, the level of noise audible within the FCRC is dependent on the noise insulation of the specific operator FCRC.

Airbus has defined a noise reduction package for in-service aircraft in order to reduce the noise levels generated by the CDLS system. This package consists of the following changes;

- introduction of 3 noise reduced strikes featuring a split operation of the push and hold coils;
- introduction of a new door controller required due to the new strike electrical operation;
- new keypad with visual feedback instead of aural feedback;
- new door bolting system with reduced internal friction and smoother operation;
- new C/B Box (similar to that in standard reliability improvement package);
- new door bolting system covers (similar to standard reliability improvement package);
- new door hinge adjustment device (similar to standard reliability improvement package).

The Noise-Reduced CDLS was installed as a standard on production A330/A340 Family aircraft through MOD's 51721 and 52652 from MSN 663 onwards. For in-service aircraft, concerned operators can contact the Airbus Upgrade Services Front Desk (upgrade.services@airbus.com) for further details or to follow the RFC/RMO procedure through their Customer Support Director.

Please refer to Airbus RIL ref. SET4 916.1817/03, dated 08-DEC-2003.

5.2 Wiring Access Review

Summary:

A review of the routing of the wiring linked to the cockpit door locking system has been carried out in order to identify any areas of improvement.

Status: (CLOSED)

One potential area of improvement has been identified on A330/A340 Family aircraft, and the solution will consist of a protection plate to prevent access to the wiring during operation.

This solution is introduced through MOD 51911 on production aircraft. On in-service aircraft this solution is available through SB's A330-25-3213/A340-25-4217/A340-25-5046, released on 12-OCT-2004.

5.3 Rigging Procedure – Door Bolt Engagement Sequence

Summary:

As part of the A330/A340 reinforced cockpit door rigging task, a number of operators have requested clarification regarding the engagement sequence of the three door bolts.

Status: (CLOSED)

It is a requirement that the upper and lower latches are engaged before the centre latch during the door closing sequence. A note is already included to this effect in AMM Subtask 52-51-21-820-050, which details the adjustment of the latch mechanisms during latch installation. This is not included in AMM Subtask 52-51-11-820-052 (door rigging procedure) for adjustment of the latches post-installation.

A note has been added to the AMM Rigging Procedure to reflect the above from the Apr/04 revision onwards

A300/A310/A300-600/A330/A340 Aircraft - CDLS Open Issues

6.1 Strike/Solenoid Premature Failure

Summary:

A300/A310/A330/A340 in-service high rate of strike failure.

Status: (CLOSED)

On A330/A340 family aircraft, the improvement package is introduced through MOD 52230. SB's A330-25-3215 / A340-25-4218 / A340-25-5047 have been issued on 19th December 03.

On A300/A310 family aircraft, the improvement package is introduced through MOD 12871. SB's A300-25-6186 / A300-25-0476 / A310-25-2167 have been issued on 6th February 04.

For further technical details, please refer to OIT/FOT Ref. SE 999.0098/03 dated 27-Aug-03 and OIT/FOT Ref. SE 999.0122/03 Revision 1 dated 21-Nov-03 and Revision 2 dated 16-Dec-03.

6.2 Centre Strike Micro Switch Failure

Summary:

Sticking/jamming of certain A300/A310/A330/A340 micro-switches

Status: (CLOSED)

The micro-switch design has been upgraded as part of the enhanced CDLS reliability improvements.

For further technical details, please refer to OIT/FOT Ref. SE 999.0098/03 dated 27-Aug-03 and OIT/FOT Ref. SE 999.0122/03 Revision 1 dated 21-Nov-03 and Revision 2 dated 16-Dec-03.
Please refer to the item 6.1 above for availability.

6.3 Strike Cotter Pin Damage

Summary:

Airbus has received a limited number of reports of either broken or missing strike cotter pins. The cotter pin is the component that connects the strike plunger head to the solenoid.

Status: (CLOSED)

The new strike will incorporate a split pin as opposed to the current cotter pin.
Please refer to the item 6.1 for availability.

5. MODIFICATION INFORMATION:

Not Applicable

6. MATERIAL:

Not Applicable

7. PROCUREMENT:

Not Applicable