

<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2014-0092</b></p> <p><b>Date: 17 April 2014</b></p> <p>Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.</p>
<p>This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p>	
<p><b>Design Approval Holder's Name:</b> AIRBUS MILITARY S.L.</p>	<p><b>Type/Model designation(s):</b> A400M aeroplanes</p>
TCDS Number:	EASA.A.169
Foreign AD:	Not applicable
Supersedure:	This AD supersedes EASA AD 2013-0305 dated 20 December 2013.
<b>ATA 31</b>	<b>Instruments – Flight Warning System Computer – Software Modification - and - Airplane Flight Manual – Sections Limitations and Abnormal Procedures – Amendment</b>
Manufacturer(s):	Airbus Military Sociedad Limitada (AMSL)
Applicability:	<p>Airbus A400M-180 aeroplanes, all manufacturer serial numbers (MSN), manufactured in conformity with EASA Type Design Definition as listed in TCDS EASA.A.169: CCM000A0002/C10 issue 7, except those aeroplanes that have been modified by incorporating Airbus Mod 84236 "Introduce new Flight Warning System (FWS) L4.3b and ATQC standard".</p> <p>Note: At the time of issuance of this AD, there are no aeroplanes in service that conform to the EASA A400M civilian type design definition. For this reason, this AD will not be published on the Agency website and only made available to the concerned TC Holders and to the military certification authorities.</p>
Reason:	<p>The results of the Airbus flight test campaign for hot weather certification revealed that the temperature limits of the engine Electronic Control Unit (ECU) could be exceeded in high temperature conditions. This finding was identified as associated with a prolonged flight with flaps extended which causes a back pressure effect on the nacelle air flow, which may decrease the ventilation flow through nacelles and, therefore, increase the nacelle internal temperature.</p> <p>This condition, if not corrected, could lead to ECU overheat, possibly resulting in an all-engines flameout.</p> <p>To address this potential unsafe condition, Airbus issued FOT-A400M-71-0001 to provide operators with recommended actions, to be taken following identification of potential engine ECU overheat in high temperature. Since that</p>

	<p>advisory document was published, Airbus issued a new Airplane Flight Manual (AFM) Temporary Revision (TR) 98 Issue 1.1 which was approved by EASA.</p> <p>Consequently, EASA issued AD 2013-0305 to require implementation of the AFM change to ensure that flight crews apply the applicable procedures and limitations.</p> <p>Since that AD was issued, Airbus developed a Flight Warning System (FWS) computer software upgrade (Airbus Temporary Quick Change ATQC V7 ECAM configuration) to further improve flight crew alerts which are linked with the flap jammed and with ECU overheat scenarios. This design change is considered as a flight crew awareness improvement and, at the same time, AFM TR98 Issue 2 has been issued for the engine ECU overheat scenario, plus a new AFM TR104 issue 1.0 for the flaps jammed and nacelle Temp Hi scenarios. The combination of these flight crew alerts associated to the upgraded ATQC V7 ECAM configuration plus the updated AFM content is an important safety improvement.</p> <p>For the reasons described above, this AD retains the requirements of EASA AD 2013-0305, which is superseded, and requires a modification by upgrading the ATQC ECAM configuration, and, concurrently, replacement of the previous AFM TR98 issue 1.0 with the combination of AFM TR98 issue 2.0 and AFM TR104 issue 1.0 by inserting these into the applicable AFM.</p>
Effective Date:	01 May 2014
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p><b>Re-statement of requirements of EASA AD 2013-0305:</b></p> <p>(1) Within 3 days after 20 December 2013 [the effective date of EASA AD 2013-0305], amend the applicable AFM to incorporate the limitations and operational procedure as detailed in Airbus AFM TR98 issue 1.1 and, thereafter, operate the aeroplane accordingly.</p> <p>This can be accomplished by inserting a copy of AFM TR98 issue 1.1, or a copy of Appendix 1 of EASA AD 2013-0305, into the applicable AFM.</p> <p><b>New requirements of this AD:</b></p> <p>(2) Within 3 months after the effective date of this AD, modify the aeroplane by implementing ATQC V7 software upgrade on current FWS computer standard L4.1c in accordance with the instructions provided in:</p> <p>(2.1) Airbus Service Bulletin (SB) A400M31-7004 for aeroplanes which are not fitted with Airbus modification (mod) 84094 "Engine relight envelope extension", and</p> <p>(2.2) Airbus SB A400M31-7005 for aeroplanes fitted with Airbus mod 84094 "Engine relight envelope extension".</p> <p>(3) Concurrent with the modification as required by paragraph (2) of this AD, amend the applicable AFM by removing Airbus AFM TR98 issue 1.1, or the copy of Appendix 1 of EASA AD 2013-0305, as applicable, from the Applicable AFM, and incorporate the limitations and operational procedures as detailed in Appendix 1 (pages of AFM TR98 issue 2.0) and Appendix 2 (pages of AFM TR104 issue 1.0) of this AD and, thereafter, operate the aeroplane accordingly.</p> <p>This can be accomplished by inserting a copy of Appendix 1 and Appendix 2 of this AD into the applicable AFM.</p> <p>(4) Amending the applicable AFM by a regular Revision that contains the limitations and operational procedures as detailed in Appendix 1 and Appendix 2 of this AD, is an acceptable method to comply with the requirements of paragraph (3) of this AD.</p>

Ref. Publications:	<p>Airbus AFM TR 98 Issue 1.1, approved by EASA on 19 December 2013.</p> <p>Airbus AFM TR 98 Issue 2.0 and TR 104 Issue 1.0, both approved by EASA on 09 April 2014.</p> <p>Airbus SB A400M31-7004 original issue, dated 15 April 2014.</p> <p>Airbus SB A400M31-7005 original issue, dated 15 April 2014.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>
Remarks:	<ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.</li> <li>3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> <li>4. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – A400M Airworthiness Office – EIAM, Fax: +33 5 61 93 20 35, E-Mail: <a href="mailto:yves.ottogali@airbus.com">yves.ottogali@airbus.com</a> or <a href="mailto:solange.gabet@airbus.com">solange.gabet@airbus.com</a>.</li> </ol>

Appendix 1 – AFM Pages Engine ECU Overheat

  <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>APPROVAL DATA</b>  <b>TEMPORARY REVISION APPROVAL PAGE</b>						
<b>TR98 Issue 2.0</b> <b>ENGINE ECU OVERHEAT</b>							
Ident.: TDU / APPRO-TRAP-00024191.0001001 / 05 FEB 14 Criteria: MT Impacted DU: NONE	IN APPROBATION						
<b>APPROVAL REFERENCE</b>							
<b>APPROVED BY: EASA</b> Approval date:							
<p>Do not remove this Temporary Revision until instructed to do so.</p> <p><b>Reason for issue:</b> This Temporary Revision (TR) is issued to provide operational recommendations to avoid engine Electronic Control Unit (ECU) overheat in high temperature conditions.</p> <p><b>Applicable to:</b> A400M aircraft.</p> <p><b>This Temporary Revision is made up of the following Temporary Documentary Units:</b></p> <table style="width: 100%; font-size: small;"> <tr> <td>APPRO-TRAP-00024191.0001001/05 FEB 14</td> <td>LIM-36-00024253.0001001/05 FEB 14</td> </tr> <tr> <td>LIM-OPS-00024189.0001001/05 FEB 14</td> <td>LIM-70-00024175.0001001/05 FEB 14</td> </tr> <tr> <td>LIM-27-00024174.0001001/05 FEB 14</td> <td></td> </tr> </table>		APPRO-TRAP-00024191.0001001/05 FEB 14	LIM-36-00024253.0001001/05 FEB 14	LIM-OPS-00024189.0001001/05 FEB 14	LIM-70-00024175.0001001/05 FEB 14	LIM-27-00024174.0001001/05 FEB 14	
APPRO-TRAP-00024191.0001001/05 FEB 14	LIM-36-00024253.0001001/05 FEB 14						
LIM-OPS-00024189.0001001/05 FEB 14	LIM-70-00024175.0001001/05 FEB 14						
LIM-27-00024174.0001001/05 FEB 14							

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Appendix 1 – continued

  <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>LIMITATIONS</b> <b>OPERATIONAL PARAMETERS</b>
<b>ENVIRONMENTAL ENVELOPE</b>	
Ident.: <b>TDU / LIM-OPS-00024189.0001001 / 05 FEB 14</b> <span style="float: right;"><b>IN APPROBATION</b></span> Criteria: MT Impacted DU: 00000199 Belongs to TR98 Issue 2.0	
1 The environmental envelope is modified to limit the operations of the aircraft to a maximum OAT of ISA + 30 °C. In addition, the maximum OAT for landing is limited to ISA + 26 °C.	

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## Appendix 1 – continued

 <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>LIMITATIONS</b> <b>FLIGHT CONTROLS</b>
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**FLAPS USE LIMITATIONS**

Ident.: TDU / LIM-27-00024174.0001001 / 05 FEB 14

IN APPROBATION

Criteria: MT

Impacted DU: NONE

Belongs to TR98 Issue 2.0

■ **If the OAT is at or below ISA + 3 °C:**

Flaps can be used as per standard operating procedures.

■ **If the OAT is above ISA + 3 °C:**

■ **In normal operating conditions:**

Flight with flaps extended must be limited to takeoff, approach and landing as per standard operating procedures.

*Note:* Training flights can be performed with flaps extended in accordance with the limitations provided in the FCOM.

■ **If the flaps are jammed, either in takeoff configurations (CONF 1, 2 or 3) or in landing configurations (CONF 4 or FULL), the flight crew must apply the following procedure, in addition to the ECAM procedure:**

**LAND ANSA.**

Target speed until final approach: VFE - 5 kt.

*Note:* Fly at VFE - 5 kt until final approach, for in-flight turn back or diversion, to minimize the time until landing and to reduce the rate of increase of the ECU temperature.

The following maximum time to land applies:

Maximum Time to Land	Up to ISA + 20 °C	ISA + 22 °C	ISA + 24 °C	ISA + 26 °C	ISA + 28 °C	ISA + 30 °C
<b>Flaps CONF 1 and 2</b>	108 min	64 min	45 min	32 min	30 min	30 min
<b>Flaps CONF 3</b>	108 min	64 min	45 min	32 min	30 min	30 min
<b>Flaps CONF 4 and FULL</b>	68 min	48 min	36 min	30 min	Not permitted	Not permitted

*Note:* The times above assume that the VFE - 5 kt procedure is followed after flaps jamming.

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Appendix 1 – continued

  <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>LIMITATIONS</b>  <b>PNEUMATIC</b>
<b>APU BLEED USE</b>	
Ident.: <b>TDU / LIM-36-00024253.0001001 / 05 FEB 14</b> Criteria: MT Impacted DU: NONE Belongs to TR98 Issue 2.0	<b>IN APPROBATION</b>
<ul style="list-style-type: none"> <li>● <b>If the OAT is at or above ISA + 20 °C:</b>                      It is recommended to use the APU bleed, whenever possible, for ground operations, takeoff, approach and landing.</li> </ul>	

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## Appendix 1 – continued (final page)

 <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>LIMITATIONS</b> <b>POWER PLANT</b>
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## ENGINE COOL DOWN BETWEEN TWO CONSECUTIVE FLIGHTS

Ident.: TDU / LIM-70-00024175.0001001 / 05 FEB 14

IN APPROBATION

Criteria: MT

Impacted DU: NONE

Belongs to TR98 Issue 2.0

Two flights are considered consecutive when there is less than 2 h between engine shutdown and engine start for the next flight.

■ **If the OAT is below ISA + 10 °C:**

No cool down procedure or time constraint between two consecutive flights is required.

■ **If the OAT is at or above ISA + 10 °C and below ISA + 25 °C:**

● **If maintenance activities are performed with ECU ON during more than 5 min (up to 25 min) between the two flights:**

Wait 15 min after the maintenance tasks (ECU OFF), or cool down the engines at ground idle during 5 min before the next flight.

■ **If the OAT is at or above ISA + 25 °C:**

Cool down the engines at ground idle during at least 10 min before engine shutdown, at the end of the first flight.

● **If maintenance activities are performed with ECU ON during more than 5 min (up to 10 min) between the two flights:**

Wait 90 min after the maintenance tasks (ECU OFF), or cool down the engines at ground idle during 25 min before the next flight.

- Note:
1. This procedure, preferably performed with flaps in clean configuration, will enable the full ECU capability to be recovered for the next flight.
  2. During engine start at or above ISA + 10 °C, if the last engine is started more than 5 min after selection of the ENG START selector to IGN START, cool down the engines at ground idle before takeoff, according to the conditions given above.
  3. For Engine Running Operations, where a single landing and takeoff is made, there are no ground cooling limitations, provided that the engines remain at ground idle and are not feathered.

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Appendix 2 – AFM Pages Updated Procedures leading to Flaps Jammed and Nacelle Temp Hi Procedure

  <p style="text-align: center;"><b>A400M</b> AIRPLANE FLIGHT MANUAL</p>	<p><b>APPROVAL DATA</b></p> <p><b>TEMPORARY REVISION APPROVAL PAGE</b></p>						
<p><b>TR104 Issue 1.0</b></p> <p><b>UPDATE OF THE PROCEDURES LEADING TO FLAPS JAMMED AND OF THE NACELLE TEMP HI PROCEDURE (CIVIL AND MILITARY)</b></p>							
Ident.: TDU / APPRO-TRAP-00024469.0001001 / 05 FEB 14	IN APPROBATION						
Criteria: MT							
Impacted DU: NONE							
<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><b>APPROVAL REFERENCE</b></td> </tr> <tr> <td style="padding: 5px;"><b>APPROVED BY: EASA</b></td> </tr> <tr> <td style="padding: 5px;">Approval date:</td> </tr> </table>		<b>APPROVAL REFERENCE</b>	<b>APPROVED BY: EASA</b>	Approval date:			
<b>APPROVAL REFERENCE</b>							
<b>APPROVED BY: EASA</b>							
Approval date:							
<p>Do not remove this Temporary Revision until instructed to do so.</p> <p><b>Reason for issue:</b> This Temporary Revision (TR) is issued to provide the updated procedure to prevent ECU overheat.</p> <p><b>Applicable to:</b> A400M aircraft with FWC L4.1C.</p> <p><b>This Temporary Revision is made up of the following Temporary Documentary Units:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">APPRO-TRAP-00024469.0001001/05 FEB 14</td> <td style="width: 50%;">ABN-27-00022019.0002001/05 FEB 14</td> </tr> <tr> <td>ABN-27-00022061.0002001/05 FEB 14</td> <td>ABN-29-00022082.0002001/05 FEB 14</td> </tr> <tr> <td>ABN-27-00022029.0002001/05 FEB 14</td> <td>ABN-70-00022129.0003001/05 FEB 14</td> </tr> </table>		APPRO-TRAP-00024469.0001001/05 FEB 14	ABN-27-00022019.0002001/05 FEB 14	ABN-27-00022061.0002001/05 FEB 14	ABN-29-00022082.0002001/05 FEB 14	ABN-27-00022029.0002001/05 FEB 14	ABN-70-00022129.0003001/05 FEB 14
APPRO-TRAP-00024469.0001001/05 FEB 14	ABN-27-00022019.0002001/05 FEB 14						
ABN-27-00022061.0002001/05 FEB 14	ABN-29-00022082.0002001/05 FEB 14						
ABN-27-00022029.0002001/05 FEB 14	ABN-70-00022129.0003001/05 FEB 14						

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## Appendix 2 – continued

  <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>ABNORMAL PROCEDURES</b>  <b>FLIGHT CONTROLS</b>
<b>F/CTL - FLAP LEVER JAMMED</b>	
Ident.: TDU / ABN-27-00022061.0002001 / 05 FEB 14 <span style="float: right;">IN APPROBATION</span> Criteria: MT Impacted DU: 00005191 Belongs to TR104 Issue 1.0	
<ul style="list-style-type: none"> <li>● <b>If flaps not in clean configuration:</b>  <b>LAND ANSA</b>            Target speed: VFE - 5 kt.             Maximum speed: speed limit displayed on the HUD or PFD.            Set TAWS flap mode to off.</li> <li>● <b>If flaps not in clean configuration:</b>            Determine the maximum time to land. <i>Refer to LIM-27 Flaps Use Limitations</i>             Check the performance limitation for landing with no flaps. <i>Refer to ABN-27 PERFORMANCE LIMITATION FOR LANDING WITH NO FLAPS</i>            Apply necessary approach speed and landing performance corrections.</li> <li>● <b>If gross weight decrease required:</b>            Apply fuel jettison procedure. <i>Refer to NORM-28 Fuel Jettison</i></li> <li>● <b>For approach and landing:</b> <ul style="list-style-type: none"> <li>● <b>If flaps at or below CONF 3:</b> <ul style="list-style-type: none"> <li>● <b>When below 500 ft:</b>                Disconnect autopilot if engaged.</li> <li>● <b>If flaps in clean configuration:</b>                Monitor pitch attitude.   <i>Note: Maximum pitch attitude: 14 °.</i></li> <li>● <b>For go-around:</b>                Disconnect autopilot if engaged.                Disconnect flight directors if engaged.</li> <li>● <b>For landing:</b> <ul style="list-style-type: none"> <li>● <b>If maximum braking is not required and autobrake available:</b>                    Arm autobrake and select medium level.                     Target speed at runway threshold: VLS.                    Adjust flare height.</li> </ul> </li> </ul> </li> </ul> </li> </ul> <p style="text-align: right;"><i>Continued on the following page</i></p>	

## Appendix 2 – continued

 <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>ABNORMAL PROCEDURES</b> <b>FLIGHT CONTROLS</b>
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*Continued from the previous page F/CTL - FLAP LEVER JAMMED*

- **At touchdown:**
  - **If maximum braking is not required and manual braking:**  
Apply medium braking level.
- **After touchdown:**  
Apply maximum reverser power.

## Appendix 2 – continued

 <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>ABNORMAL PROCEDURES</b> <b>FLIGHT CONTROLS</b>
<b>F/CTL - FLAPS LOCKED</b>	
Ident.: TDU / ABN-27-00022029.0002001 / 05 FEB 14 <span style="float: right;">IN APPROBATION</span> Criteria: MT Impacted DU: 00000393 Belongs to TR104 Issue 1.0	
<ul style="list-style-type: none"> <li>● <b>If flaps not in clean configuration:</b>  <b>LAND ANSA</b>            Target speed: VFE - 5 kt.             Maximum speed: speed limit displayed on the HUD or PFD.</li> <li>● <b>If flaps position are not in 4 or FULL:</b>            Set TAWS flap mode to off.</li> <li>● <b>If flaps not in clean configuration:</b>            Determine the maximum time to land. <i>Refer to LIM-27 Flaps Use Limitations</i></li> </ul> <p>Check the performance limitation for landing with no flaps. <i>Refer to ABN-27 PERFORMANCE LIMITATION FOR LANDING WITH NO FLAPS</i></p> <p>Apply necessary approach speed and landing performance corrections.</p> <ul style="list-style-type: none"> <li>● <b>If gross weight decrease required:</b>            Apply fuel jettison procedure. <i>Refer to NORM-28 Fuel Jettison</i></li> <li>● <b>For approach and landing:</b> <ul style="list-style-type: none"> <li>● <b>If flaps at or below CONF 3:</b> <ul style="list-style-type: none"> <li>● <b>When below 500 ft:</b>                Disconnect autopilot if engaged.</li> <li>● <b>If flaps in clean configuration:</b>                Monitor pitch attitude.   <i>Note: Maximum pitch attitude: 14 °.</i>                 Select flaps lever to FLAPS 1.</li> <li>● <b>For landing:</b> <ul style="list-style-type: none"> <li>● <b>If maximum braking is not required and autobrake available:</b>                    Arm autobrake and select medium level.                     Target speed at runway threshold: VLS.                    Adjust flare height.</li> </ul> </li> </ul> </li> </ul> </li> </ul> <p style="text-align: right;"><i>Continued on the following page</i></p>	

## Appendix 2 – continued

 <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>ABNORMAL PROCEDURES</b> <b>FLIGHT CONTROLS</b>
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*Continued from the previous page F/CTL - FLAPS LOCKED*

- **At touchdown:**
  - **If maximum braking is not required and manual braking:**  
Apply medium braking level.
- **After touchdown:**  
Apply maximum reverser power.

## Appendix 2 – continued

  <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>ABNORMAL PROCEDURES</b> <b>FLIGHT CONTROLS</b>
<b>F/CTL - FLAP SYS 1+2 FAULT</b>	
Ident.: TDU / ABN-27-00022019.0002001 / 05 FEB 14 <span style="float: right;"><b>IN APPROBATION</b></span> Criteria: MT Impacted DU: 00000392 Belongs to TR104 Issue 1.0	
<ul style="list-style-type: none"> <li>● <b>If flaps not in clean configuration:</b>  <b>LAND ANSA</b>            Target speed: VFE - 5 kt.            Maximum speed: speed limit displayed on the HUD or PFD.</li> <li>● <b>If the flaps system is jammed:</b>            Recycle the flap lever.</li> <li>● <b>If flaps position are not in 4 or FULL:</b>            Set TAWS flap mode to OFF.</li> <li>● <b>If flaps not in clean configuration:</b>            Determine the maximum time to land. <i>Refer to LIM-27 Flaps Use Limitations</i></li> </ul> <p>Check the performance limitation for landing with no flaps. <i>Refer to ABN-27 PERFORMANCE LIMITATION FOR LANDING WITH NO FLAPS</i>            Apply necessary approach speed and landing performance corrections.</p> <ul style="list-style-type: none"> <li>● <b>If gross weight decrease required:</b>            Apply fuel jettison procedure. <i>Refer to NORM-28 Fuel Jettison</i></li> <li>● <b>For approach and landing:</b> <ul style="list-style-type: none"> <li>● <b>If flaps at or below CONF 3:</b> <ul style="list-style-type: none"> <li>● <b>When below 500 ft:</b>                Disconnect autopilot if engaged.</li> <li>● <b>If flaps in clean configuration:</b>                Monitor pitch attitude.   <i>Note: Maximum pitch attitude: 14 °.</i>                Select flaps lever to FLAPS 1.</li> </ul> </li> <li>● <b>For landing:</b> <ul style="list-style-type: none"> <li>● <b>If maximum braking is not required and autobrake available:</b>                Arm autobrake and select medium level.</li> </ul> </li> </ul> </li> </ul> <p style="text-align: right;"><i>Continued on the following page</i></p>	

## Appendix 2 – continued

 <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>ABNORMAL PROCEDURES</b> <b>FLIGHT CONTROLS</b>
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*Continued from the previous page F/CTL - FLAP SYS 1+2 FAULT*

Adjust flare height.

Target speed at runway threshold: VLS.

● **At touchdown:**

● **If maximum braking is not required and manual braking:**

Apply medium braking level.

● **After touchdown:**

Apply maximum reverser power.

## Appendix 2 – continued

 <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>ABNORMAL PROCEDURES</b> <b>HYDRAULIC</b>
<b>HYD - B+Y SYS PRESS LO</b>	
Ident.: TDU / ABN-29-00022082.0002001 / 05 FEB 14 <span style="float: right;">IN APPROBATION</span> Criteria: MT Impacted DU: 00000398 Belongs to TR104 Issue 1.0	
<p><i>Note:</i> Flight controls are in alternate law.</p> <ul style="list-style-type: none"> <li>● <b>If flaps not in clean configuration:</b>  <b>LAND ANSA</b>            Target speed: VFE - 5 kt.            Turn off blue and yellow hydraulic pumps of all engines.            Maximum speed: speed limit displayed on the HUD or PFD.</li> </ul> <p><i>Note:</i></p> <ol style="list-style-type: none"> <li>1. Flaps are inoperative.</li> <li>2. Nosewheel steering is inoperative.</li> <li>3. If all landing gears are already locked down when the alert appears, the retraction of landing gear is not possible.</li> <li>4. Accumulator braking only.</li> <li>5. Most spoilers are inoperative.</li> </ol> <p>Set TAWS flap mode to off.</p> <ul style="list-style-type: none"> <li>● <b>For approach and landing:</b>            Apply necessary approach speed and landing performance corrections.            Target low descent rate for landing.</li> <li>● <b>If flaps not in clean configuration:</b>            Determine the maximum time to land. <i>Refer to LIM-27 Flaps Use Limitations</i></li> </ul> <p>Check the performance limitation for landing with no flaps. <i>Refer to ABN-27 PERFORMANCE LIMITATION FOR LANDING WITH NO FLAPS</i></p> <p>Land with care.</p> <ul style="list-style-type: none"> <li>● <b>If gross weight decrease required:</b>            Apply fuel jettison procedure. <i>Refer to NORM-28 Fuel Jettison</i>            Use manual roll trim and yaw trim.</li> <li>■ <b>If any hydraulic system was overheated without hydraulic reservoir air pressure low:</b> <ul style="list-style-type: none"> <li>● <b>When affected system overheat has disappeared:</b>                Recover the affected hydraulic system.</li> </ul> </li> </ul> <p style="text-align: right;"><i>Continued on the following page</i></p>	

TR104 Issue 1.0  
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## Appendix 2 – continued

 <p><b>A400M</b> AIRPLANE FLIGHT MANUAL</p>	<b>ABNORMAL PROCEDURES</b> <b>HYDRAULIC</b>
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*Continued from the previous page HYD - B+Y SYS PRESS LO*

- **If any hydraulic reservoir air pressure was low:**
  - **If affected hydraulic system was overheated:**
    - **When affected system overheat has disappeared:**  
Recover the affected hydraulic system.
    - **If affected hydraulic not recovered:**  
Turn off affected hydraulic system pumps.
  - **If affected hydraulic system was not overheated:**  
Recover the affected hydraulic system.
    - **If affected hydraulic not recovered:**  
Turn off affected hydraulic system pumps.
- **If landing gear not locked down when the alert appears:**  
Extend landing gear by gravity. *Refer to ABN-32 L/G GRAVITY EXTENSION*
- **If flaps at or below CONF 3 and not in clean configuration:**  
The speed brakes are not available.
  - **When below 500 ft:**  
Disconnect autopilot if engaged.
- **If flaps in clean configuration:**  
The speed brakes are partially available.
  - **When below 500 ft:**  
Disconnect autopilot if engaged.

Monitor pitch attitude.

*Note: Maximum pitch attitude: 14 °.*

Select flaps lever to FLAPS 1.

  - **For landing:**  
Turn off antiskid.  
Adjust flare height.  
Target speed at runway threshold: VLS.
  - **At touchdown:**  
Apply moderate continuous braking.

*Continued on the following page*

## Appendix 2 – continued

 <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>ABNORMAL PROCEDURES</b> <b>HYDRAULIC</b>
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*Continued from the previous page HYD - B+Y SYS PRESS LO*

*Note: Brake pressure must not exceed 1 000 PSI.*

● **After touchdown:**

Apply maximum reverser power.

Do not perform braked pivot turn.

## Appendix 2 – continued (final page)

 <b>A400M</b> AIRPLANE FLIGHT MANUAL	<b>ABNORMAL PROCEDURES</b> <b>POWER PLANT</b>
<b>ENG - NACELLE TEMP HI</b>	
Ident.: TDU / ABN-70-00022129.0003001 / 05 FEB 14 Criteria: MT Impacted DU: 00016709 Belongs to TR104 Issue 1.0	
<div style="text-align: right;">IN APPROBATION</div> <ul style="list-style-type: none"> <li>● <b>If nacelle high temperature detected on engine 1 or engine 2 :</b> <ul style="list-style-type: none"> <li>Turn off engine 1 bleed and engine 2 bleed.</li> <li>Close crossbleed.</li> <li>Turn off pack 1.</li> </ul> <p><i>Note: Wing anti-ice is inoperative. Refer to ABN-30 WING A-ICE FAULT OR OFF</i></p> </li> <li>● <b>If nacelle high temperature detected on engine 3 or engine 4 :</b> <ul style="list-style-type: none"> <li>Turn off engine 3 bleed and engine 4 bleed.</li> <li>Turn off APU bleed.</li> <li>Close crossbleed.</li> <li>Turn off pack 2.</li> </ul> <p><i>Note: Wing anti-ice is inoperative. Refer to ABN-30 WING A-ICE FAULT OR OFF</i></p> </li> <li>● <b>If the alert persists:</b> <ul style="list-style-type: none"> <li>Select flaps 0.</li> <li>Consider speed increase.</li> <li>● <b>If the alert persists after 15 min:</b> <ul style="list-style-type: none"> <li>Shut down affected engine.</li> </ul> </li> </ul> </li> </ul>	

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