

NOTICE TO OPERATORS BR700 ENGINES NTO No.: 175



Issue No.: 03 Date: 09th February 2018

TITLE: Nuisance Cockpit Effects and Fault Messages

Valid until: Indefinite **ATA Area:** 73-21-00

EFFECTIVITY: All BR710 A2-20 engines

PURPOSE: To inform operators of potential nuisance messages and control effects

Reason for issue 03:

NOTE: This NTO is applicable to all BR710 A2-20 engines and **superseded NTO 40.**

The following fault messages have been either added or revised (highlighted “#” column in table appendix) in issue 3 of NTO 175:

Advisory (cyan) L (R) FADEC FAULT / Short Term Dispatch (STD):

- 7326516L(R)BR, EEC CH A FAULT [2]
- 7326517L(R)BR, EEC CH B FAULT [2]
- 7327316L(R)BR, L(R) SAV CH A WRG/SAV [SOL] RNG
- 7327317L(R)BR, L(R) SAV CH B WRG/SAV [SOL] RNG
- 7326622L(R)BR, L(R) IOP CH A WRG/FMU[IOP SOL] RNG
- 7326623L(R)BR, L(R) IOP CH B WRG/FMU[IOP SOL] RNG

Long Term Dispatch (LTD) / Maintenance Alert (MA):

- 7327614L(R)BR, L (R) DMC (FLIGHT LEG INPUT) MA
- 7326714L(R)BR, L (R) EEC CH A FAULT [2]
- 7326715L(R)BR, L (R) EEC CH B FAULT [2]

BACKGROUND:

To improve troubleshooting of FADEC fault messages, Rolls-Royce Deutschland would like to inform operators of potential EEC generated nuisance flight deck effects (Caution (amber) “L/R FADEC FAIL” or Caution (amber) “ENG OVERSPEED” or Advisory (cyan) “L/R FADEC FAULT”) and their related fault messages.

Furthermore it is possible to get nuisance “LONG TERM DISPATCH” related fault messages with no associated flight deck effect. These may be transmitted to the aircraft as a result of false or unexpected indications from aircraft systems, FADEC components or an incorrectly followed operating procedure.

The fault messages and the combinations of fault messages identified in this NTO 175 can be either valid faults or nuisance messages or secondary effects. To identify whether the message is valid or nuisance or a secondary effect, follow the procedure, which is given under: “Operator Action” in the attached table (appendix). If the message does not reappear after completion of the “Operator Action” procedure, the message can then be regarded as a “nuisance” / “misleading” message or secondary effect.

NOTE: Use the “SMARTFIX™Plus” (SFP) tool with the applicable fault code for trouble shooting / fault isolation.

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Effectivity verification:

The instruction given under “Operator Action” for any listed fault message in the appendix of this NTO is only applicable to aircraft / engines when the “Effectivity (EEC SW)” is equal to the software configuration installed on your specific engine (refer to table 01).

If in doubt (e.g. when a lease / spare engine is installed), contact your Regional Customer Support Manager (RCM).

EEC Software (SW)	Aircraft / Engine Effectivity	EEC Partnumber
All	all aircraft / engines regardless of the EEC software / hardware configuration	all
X	all aircraft S/N: 9249 onwards <u>OR</u> engines S/N: 12619 onwards	EECU1000-**-A*
C	all aircraft prior to S/N: 9249 <u>OR</u> engines prior to ESN 12619	1520KDC0*-***
C8	all aircraft prior to S/N: 9249 <u>OR</u> engines prior to ESN 12619 that have Rolls-Royce SB 73-101761 embodied	1520KDC0*-011
C7.0.2 and C6.0	all aircraft prior to S/N: 9249 <u>OR</u> engines prior to ESN 12619 that do not have Rolls-Royce SB 73-101761 embodied	1520KDC0*-010 1520KDC0*-005

*could be any number / letter

Table 01

Nuisance Message Prevention:

With the engine not running or NH / N2 shaft speeds less than 35%, the EEC is depending on aircraft power supply. To prevent the nuisance cockpit effects and fault messages in the appendix of this NTO as a result of switching off the electrical aircraft power too early after engine shut down, the minimum time between engine shut down and switching off the electrical power from the aircraft has to be at least 5 minutes.

Maintenance Burden Reduction / EEC Investigation / Repair Support:

In an effort to minimize impact to operators and to reduce unnecessary EEC removals, RRD has developed troubleshooting guidelines that supplement the aircraft fault isolation procedures. When engine anomalies are observed and are believed to be attributable to the EEC, operators are advised to work in accordance with NTO 155 latest revision.

All operators should note that some of the actions attached include engine running. The procedures how to run the engine are all included in the Engine Maintenance Manual (EMM).

This NTO will be revised when corrective actions to address some of the nuisance messages have been implemented in future EEC software updates.

Where an EEC software solution is not feasible, the relevant trouble shooting / fault isolation will be revised where applicable in order to include the information of this NTO therein.

This document does not contain data approved by an Airworthiness Authority. It may neither override nor supersede any formal instructions provided by Technical Publications, such as Manuals or Service Bulletins. Should there be conflicting information, the approved Manuals or Service Bulletins always take precedence over the NTO. Operators should contact Rolls-Royce Deutschland Service Engineering immediately in such a case.

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Nuisance or Misleading EICAS Messages			
#	EICAS Message	Operator Action	Effectivity (EEC SW)
1	Caution (amber) L (R) ENG OVERSPEED	<p>EICAS message set on-ground after a commanded engine shut-down / during engine run-down:</p> <p>1. Look for the fault messages that follow on CAIMS / OMS:</p> <p>For CAIMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) <p>For OMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-47-00-970-801 (Access to view Fault messages) - AMM Task 45-47-00-970-802 (Access to view Services messages) <ul style="list-style-type: none"> - L (R) N1 SPEED CH A WRG/PROBE RNG OR - L (R) N1 SPEED CH B WRG/PROBE RNG OR - L (R) N2 SPEED CH A WRG/PROBE RNG OR - L (R) N2 SPEED CH B WRG/PROBE RNG <p>2. If one the above fault messages was set prior to the EICAS message, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p> <p>NOTE: If no fault message was set or the EICAS message was set with the engine running above idle, contact RRD.</p>	all

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Nuisance or Misleading Fault Messages Caution (amber) L (R) FADEC FAIL / Do Not Dispatch (DND)				
#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
1	7326320L(R)BR	L (R) FMU [HPSOV]	<p style="text-align: center;">EEC ABORTED AUTO START</p> <p>1. If an Automatic Ground Start Abort (EICAS, Caution (amber) L(R) AUTOSTART ABORT can be confirmed, carry out the SFP (SMARTFIX™ Plus) troubleshooting recommendation for the EICAS message: Caution (amber) L(R) AUTOSTART ABORT</p> <p>2. If not, erase the CAIMS / OMS EEC memory. For CAIMS refer to: - AMM TASK 45-45-00-970-822 (Access to Non-Volatile Memory (NVM) management) For OMS refer to: - AMM Task 45-47-00-970-803 (Access to perform Line Replaceable Unit (LRU) / system operations)</p> <p>3. Wet motor the engine. Refer to (EMM TASK 71-00-00-866-817)</p> <p>NOTE: Ensure that the indicated fuel flow is greater than 200 pph.</p> <p>4. Look for the fault code on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>5. If the fault code occurs again or the engine fuel flow is not normal, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all

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Nuisance or Misleading Fault Messages Caution (amber) L (R) FADEC FAIL / Do Not Dispatch (DND)				
#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
2	7325424L(R)BR OR 7325425L(R)BR	L (R) EEC CH A FAULT[7] OR L (R) EEC CH B FAULT[7]	<p>1. Erase the CAIMS / OMS EEC memory. For CAIMS refer to: - AMM TASK 45-45-00-970-822 (Access to Non-Volatile Memory (NVM) management) For OMS refer to: - AMM Task 45-47-00-970-803 (Access to perform Line Replaceable Unit (LRU) / system operations)</p> <p>NOTE: THIS FAULT MESSAGE IS STORED / LATCHED WITHIN THE EEC NVM. CYCLING OF THE EEC POWER OR SWAPPING OF THE EEC TO ANOTHER ENGINE WILL NOT CLEAR THE FAULT / EICAS MESSAGE.</p> <p>2. Start the engine. Refer to (EMM TASK 71-00-00-866-806)</p> <p>3. Stop the engine. Refer to (EMM TASK 71-00-00-866-809)</p> <p>4. Look for the fault code on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>5. If the fault code occurs again, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
3	7326322L(R)BR OR 7326323L(R)BR	L (R) IOP CH A WRG/FMU[IOP SOL] OR L (R) IOP CH B WRG/FMU[IOP SOL]	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>- L (R) IOP CH A WRG/FMU[IOP SOL] AND L (R) EEC CH A FAULT [1] OR - L (R) IOP CH B WRG/FMU[IOP SOL] AND L (R) EEC CH B FAULT [1]</p> <p>2. If one of the above fault message combinations was set during an engine shut down, carry out trouble shooting for the fault message L (R) EEC CH A FAULT [1] or L (R) EEC CH B FAULT [1] otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
4	7326318L(R)BR AND 7326319L(R)BR	L (R) FMU CH A WRG/FMU[MICRO SW] DIS AND L (R) FMU CH B WRG/FMU[MICRO SW] DIS	<p style="text-align: center;">EEC COMMANDED ENGINE SHUTDOWN</p> <p>1. If an Automatic Ground Start Abort (EICAS, Caution (amber) L(R) AUTOSTART ABORT or an EEC commanded engine shutdown (fault message L (R) EEC [DUAL LANE HEALTH]) can be confirmed the fault codes can be regarded as a nuisance.</p> <p>2. If the fault messages occur again or the indicated fuel flow during engine starting is not normal, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault / EICAS message.</p>	all

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
5	7326014L(R)BR	L (R) P30 TUBE[LEAK/BLKG]/EEC	<p>1. Erase the CAIMS / OMS EEC memory. For CAIMS refer to: - AMM Task 45-45-00-970-822 (Access to Non-Volatile Memory (NVM) management) For OMS refer to: - AMM Task 45-47-00-970-803 (Access to perform Line Replaceable Unit (LRU) / system operations)</p> <p>2. Perform a Power Assurance Test. Refer to (EMM TASK 71-00-00-866-818)</p> <p>3. Look for the fault messages regarding P30, P20 and/or T20 faults on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>4. If P20 AND / OR T20 fault messages also show up, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message first.</p> <p>NOTE: This fault message could be set as a result of an EEC commanded in-flight shutdown.</p>	all
6	7326619L(R)BR AND 7326622L(R)BR AND 7325525L(R)BR AND 7326123L(R)BR	L (R) FMU CH B WRG/FMU[MICRO SW] DIS AND L (R) IOP CH A WRG/FMU[IOP SOL] RNG AND L (R) IOP CH B WRG/FMU[IOP SOL] RNG AND L (R) EEC RESET DISCRETE WRG	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>2. If the four fault messages: - L (R) FMU CH B WRG/FMU[MICRO SW] DIS AND - L (R) IOP CH A WRG/FMU[IOP SOL] RNG AND - L (R) IOP CH B WRG/FMU[IOP SOL] RNG AND - L (R) EEC RESET DISCRETE WRG were set in-flight, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	X and C8

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
7	7326618L(R)BR AND	L (R) FMJ CH A WRG/FMU[MICRO SW] DIS AND	1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) 2. If the four fault messages: - L (R) FMJ CH A WRG/FMU[MICRO SW] DIS AND - L (R) IOP CH B WRG/FMU[IOP SOL] RNG AND - L (R) IOP CH A WRG/FMU[IOP SOL] RNG AND - L (R) EEC RESET DISCRETE WRG were set in-flight, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.	X and C8
	7326623L(R)BR AND	L (R) IOP CH B WRG/FMU[IOP SOL] RNG AND		
	7325524L(R)BR AND	L (R) IOP CH A WRG/FMU[IOP SOL] RNG AND		
	7326123L(R)BR	L (R) EEC RESET DISCRETE WRG		
8	7326619L(R)BR AND	L (R) FMJ CH B WRG/FMU[MICRO SW] DIS AND	1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) 2. If the three fault messages: - L (R) FMJ CH B WRG/FMU[MICRO SW] DIS AND - L (R) EEC CH A FAULT[7] AND - L (R) EEC RESET DISCRETE WRG were set after an on-ground engine shutdown, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.	C6 and C7
	7325424L(R)BR AND	L (R) EEC CH A FAULT[7] AND		
	7326123L(R)BR	L (R) EEC RESET DISCRETE WRG		

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
9	7326618L(R)BR	L (R) FMU CH A WRG/FMU[MICRO SW] DIS	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) <p>For OMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) <p>2. If the three fault messages:</p> <ul style="list-style-type: none"> - L (R) FMU CH A WRG/FMU[MICRO SW] DIS AND - L (R) EEC CH B FAULT[7] AND - L (R) EEC RESET DISCRETE WRG <p>were set after an on-ground engine shutdown, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	C6 and C7
	AND	AND		
	7325425L(R)BR	L (R) EEC CH B FAULT[7]		
	AND	AND		
	7326123L(R)BR	L (R) EEC RESET DISCRETE WRG		
10	7326618L(R)BR	L (R) FMU CH A WRG/FMU[MICRO SW] DIS	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) <p>For OMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) <p>2. If the four fault messages:</p> <ul style="list-style-type: none"> - L (R) FMU CH A WRG/FMU[MICRO SW] DIS AND - L (R) EEC CH A FAULT[7] AND - L (R) EEC CH B FAULT[7] AND - L (R) EEC RESET DISCRETE WRG <p>were set after an aborted engine start or uncommanded engine shutdown with the A/C on ground, carry out trouble shooting for fault message: EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	C6 and C7
	AND	AND		
	7325424L(R)BR	L (R) EEC CH A FAULT[7]		
	AND	AND		
	7325425L(R)BR	L (R) EEC CH B FAULT[7]		
	AND	AND		
	7326123L(R)BR	L (R) EEC RESET DISCRETE WRG		

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
11	7326619L(R)BR	L (R) FMU CH B WRG/FMU[MICRO SW] DIS	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) <p>For OMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) <p>2. If the four fault messages:</p> <ul style="list-style-type: none"> - L (R) FMU CH B WRG/FMU[MICRO SW] DIS AND - L (R) EEC CH A FAULT[7] AND - L (R) EEC CH B FAULT[7] AND - L (R) EEC RESET DISCRETE WRG <p>were set after an aborted engine start or uncommanded engine shutdown with the A/C on ground, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	C6 and C7
	AND	AND		
	7325424L(R)BR	L (R) EEC CH A FAULT[7]		
	AND	AND		
	7325425L(R)BR	L (R) EEC CH B FAULT[7]		
	AND	AND		
	7326123L(R)BR	L (R) EEC RESET DISCRETE WRG		
12	7326618L(R)BR	L (R) FMU CH A WRG/FMU[MICRO SW] DIS	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) <p>For OMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) <p>2. If the four fault messages:</p> <ul style="list-style-type: none"> - L (R) FMU CH A WRG/FMU[MICRO SW] DIS AND - L (R) EEC CH B FAULT[7] AND - L (R) IOP CH A WRG/FMU[IOP SOL] AND - L (R) EEC RESET DISCRETE WRG <p>were set in-flight, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	C6 and C7
	AND	AND		
	7325425L(R)BR	L (R) EEC CH B FAULT[7]		
	AND	AND		
	7325524L(R)BR	L (R) IOP CH A WRG/FMU[IOP SOL]		
	AND	AND		
	7326123L(R)BR	L (R) EEC RESET DISCRETE WRG		

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13	7326619L(R)BR	L (R) FMU CH B WRG/FMU[MICRO SW] DIS	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) <p>For OMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) <p>2. If the four fault messages:</p> <ul style="list-style-type: none"> - L (R) FMU CH B WRG/FMU[MICRO SW] DIS AND - L (R) EEC CH A FAULT[7] AND - L (R) IOP CH B WRG/FMU[IOP SOL] AND - L (R) EEC RESET DISCRETE WRG <p>were set in-flight, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	C6 and C7
	AND	AND		
	7325424L(R)BR	L (R) EEC CH A FAULT[7]		
	AND	AND		
	7325525L(R)BR	L (R) IOP CH B WRG/FMU[IOP SOL]		
	AND	AND		
	7326123L(R)BR	L (R) EEC RESET DISCRETE WRG		
14	7326618L(R)BR	L (R) FMU CH A WRG/FMU[MICRO SW] DIS	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) <p>For OMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) <p>2. If the three fault messages:</p> <ul style="list-style-type: none"> - L (R) FMU CH A WRG/FMU[MICRO SW] DIS AND - L (R) IOP CH B WRG/FMU[IOP SOL] RNG AND - L (R) EEC RESET DISCRETE WRG <p>were set after an on-ground engine shutdown, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	X and C8
	AND	AND		
	7326623L(R)BR	L (R) IOP CH B WRG/FMU[IOP SOL] RNG		
	AND	AND		
	7326123L(R)BR	L (R) EEC RESET DISCRETE WRG		

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
15	7326619L(R)BR AND	L (R) FMJ CH B WRG/FMU[MICRO SW] DIS AND	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>2. If the three fault messages: - L (R) FMJ CH B WRG/FMU[MICRO SW] DIS AND - L (R) IOP CH A WRG/FMU[IOP SOL] RNG AND - L (R) EEC RESET DISCRETE WRG were set after an on-ground engine shutdown, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	X and C8
	7326622L(R)BR AND	L (R) IOP CH A WRG/FMU[IOP SOL] RNG AND		
	7326123L(R)BR	L (R) EEC RESET DISCRETE WRG		
16	7326618L(R)BR AND	L (R) FMJ CH A WRG/FMU[MICRO SW] DIS AND	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>2. If the four fault messages: - L (R) FMJ CH A WRG/FMU[MICRO SW] DIS AND - L (R) IOP CH B WRG/FMU[IOP SOL] RNG AND - L (R) IOP CH A WRG/FMU[IOP SOL] RNG AND - EEC RESET DISCRETE WRG were set after an aborted engine start or uncommanded engine shutdown with the A/C on ground, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	X and C8
	7326623L(R)BR AND	L (R) IOP CH B WRG/FMU[IOP SOL] RNG AND		
	7326622L(R)BR AND	L (R) IOP CH A WRG/FMU[IOP SOL] RNG AND		
	7326123L(R)BR	L (R) EEC RESET DISCRETE WRG		

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Nuisance or Misleading Fault Messages Caution (amber) L (R) FADEC FAIL / Do Not Dispatch (DND)				
#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
17	7326619L(R)BR AND	L (R) FMU CH B WRG/FMU[MICRO SW] DIS AND	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>2. If the four fault messages: - L (R) FMU CH B WRG/FMU[MICRO SW] DIS AND - L (R) IOP CH A WRG/FMU[IOP SOL] RNG AND - L (R) IOP CH B WRG/FMU[IOP SOL] RNG AND - L (R) EEC RESET DISCRETE WRG</p> <p>were set after an aborted engine start or uncommanded engine shutdown with the A/C on ground, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	X and C8
	7326622L(R)BR AND	L (R) IOP CH A WRG/FMU[IOP SOL] RNG AND		
	7326623L(R)BR AND	L (R) IOP CH B WRG/FMU[IOP SOL] RNG AND		
	7326123L(R)BR	L (R) EEC RESET DISCRETE WRG		

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Advisory (cyan) L (R) FADEC FAULT / Short Term Dispatch (STD)				
#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
1	7326422L(R)BR	L (R) ARINC CH A [INPUT] IACP L (R) ARINC CH A [INPUT] DMCP	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	AND	AND		
2	7326423L(R)BR	L (R) ARINC CH B [INPUT] IACP L (R) ARINC CH B [INPUT] DMCP	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	AND	AND		
3	7326424L(R)BR	L (R) ARINC CH A [INPUT] IACS L (R) ARINC CH A [INPUT] DMCS	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	AND	AND		
4	7326425L(R)BR	L (R) ARINC CH B [INPUT] IACS L (R) ARINC CH B [INPUT] DMCS	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	AND	AND		
5	7326426L(R)BR	L (R) ARINC CH A [INPUT] ADCP	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	AND	AND		
6	7326427L(R)BR	L (R) ARINC CH B [INPUT] ADCP	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	AND	AND		
7	7326428L(R)BR	L (R) ARINC CH A [INPUT] ADCS	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	AND	AND		
8	7326429L(R)BR	L (R) ARINC CH B [INPUT] ADCS	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	AND	AND		

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
5	7326214L(R)BR	L (R) HIGH TENSION IGNITION [1]	<p style="text-align: center;">EEC ABORTED AUTOSTART</p> <p>1. Look for the fault message L (R) FMU [HPSOV] (EICAS, Caution (amber) L(R) FADEC FAIL) on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>2. If this message is shown, perform the SFP (SMARTFIX™ Plus) troubleshooting recommendation for the EICAS message: L(R) AUTOSTART ABORT</p> <p>The L (R) HIGH TENSION IGNITION [1] OR L (R) HIGH TENSION IGNITION [2] was a nuisance message.</p>	all
	OR	OR		
	7326215L(R)BR	L (R) HIGH TENSION IGNITION [2]		
6	7326414L(R)BR	L (R) EEC CH A FAULT [1]	<p>Look for the fault message L (R) EEC RESET DISCRETE WRG (L(R) FADEC FAIL) on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>If set, carry out trouble shooting for fault message: L (R) EEC RESET DISCRETE WRG otherwise, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	X
	OR	OR		
	7326415L(R)BR	L (R) EEC CH B FAULT [1]		

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
7	7326414L(R)BR OR 7326415L(R)BR	L (R) EEC CH A FAULT [1] OR L (R) EEC CH B FAULT [1]	<p>1. Erase the CAIMS / OMS EEC memory. For CAIMS refer to: - AMM TASK 45-45-00-970-822 (Access to Non-Volatile Memory (NVM) management) For OMS refer to: - AMM Task 45-47-00-970-803 (Access to perform Line Replaceable Unit (LRU) / system operations)</p> <p>2. Perform an Engine Start. Refer to (EMM TASK 71-00-00-866-806) 3. Stop the Engine. Refer to (EMM TASK 71-00-00-866-809) 4. Look for the fault messages that follow on the CAIMS / OMS: For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>a) L (R) EEC CH A FAULT [1] AND L (R) N1 SPEED CH B WRG/PROBE RNG OR L (R) N2 SPEED CH B WRG/PROBE RNG b) L (R) EEC CH B FAULT [1] AND L (R) N1 SPEED CH A WRG/PROBE RNG OR L (R) N2 SPEED CH A WRG/PROBE RNG</p> <p>5. If one of the above fault message combinations was set, the L (R) EEC CH A FAULT[1] OR L (R) EEC CH B FAULT[1] was a nuisance message, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	C

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
8	7326516L(R)BR	EEC CH A FAULT [2]	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) <p>For OMS refer to:</p> <ul style="list-style-type: none"> - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) <p>2. If the fault is active, cycle the fuel control switch. If the fault clears, monitor for further occurrences. No immediate trouble shooting is required. If not, continue with the next step.</p> <p>3. Interrogate CAIMS / OMS for other FADEC system fault codes (refer to fault codes in step 7)</p> <p>4. Perform fault isolation for any other FADEC system fault first</p> <p>5. If the fault is still present, swap the EECs between the engines</p> <p>6. If the fault follows the EEC to the other engine, replace the EEC.</p> <p>7. If the fault stays on the same engine, perform T/S for the faults below in accordance with the troubleshooting recommendation in SFP (SMARTFIX™ Plus):</p> <ul style="list-style-type: none"> - L (R) TR LOWER L STOW WRG/MICRO SW - L (R) TR UPPER L STOW WRG/MICRO SW - L (R) TR LOWER R STOW WRG/MICRO SW - L (R) TR UPPER R STOW WRG/MICRO SW - L (R) TR CH A WRG/ICU[PRESS SW] RNG - L (R) SAV CH A WRG/SAV [MICRO SW] DIS - L (R) OIL FILTER[BLKG]/PRESS SW/WRG - L (R) FMU CH A WRG/FMU[MICRO SW] DIS - L (R) CH A ENGINE LOCATION WRG/EEC 	X

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Advisory (cyan) L (R) FADEC FAULT / Short Term Dispatch (STD)				
#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
9	7326517L(R)BR	EEC CH B FAULT [2]	<p>1. Look for the fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>2. If the fault is active, cycle the fuel control switch. If the fault clears, monitor for further occurrences. No immediate trouble shooting is required. If not, continue with the next step.</p> <p>3. Interrogate CAIMS / OMS for other FADEC system fault codes (refer to fault codes in step 7)</p> <p>4. Perform fault isolation for any other FADEC system fault first</p> <p>5. If the fault is still present, swap the EECs between the engines</p> <p>6. If the fault follows the EEC to the other engine, replace the EEC.</p> <p>7. If the fault stays on the same engine, perform T/S for the faults below in accordance with the troubleshooting recommendation in SFP (SMARTFIX™ Plus):</p> <ul style="list-style-type: none"> - L (R) TR LOWER L STOW WRG/MICRO SW - L (R) TR UPPER L STOW WRG/MICRO SW - L (R) TR LOWER R STOW WRG/MICRO SW - L (R) TR UPPER R STOW WRG/MICRO SW - L (R) TR CH B WRG/ICU[PRESS SW] RNG - L (R) SAV CH B WRG/SAV [MICRO SW] DIS - L (R) FUEL FILTER DIFF PRESS WRG/SWITCH - L (R) FMU CH B WRG/FMU[MICRO SW] DIS - L (R) CH B ENGINE LOCATION WRG/EEC 	X

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
10	7327316L(R)BR OR 7327317L(R)BR	L(R) SAV CH A WRG/SAV [SOL] RNG OR L(R) SAV CH B WRG/SAV [SOL] RNG	<ol style="list-style-type: none"> Look for the fault messages on on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) If the fault message was set after performing the engine tail wind starting procedure, it was a nuisance message / secondary effect otherwise perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message. <p>NOTE: When doing the procedure for engine tail wind start, after selection of the START switch to AUTO, wait 5 seconds or until the SVO indication disappears before selecting the ENGINE RUN switch to ON, to avoid the L(R) FADEC FAULT EICAS message as a result of the L(R) SAV CH A/B WRG/SAV [SOL] RNG fault message.</p>	all
11	7326622L(R)BR OR 7326623L(R)BR	L(R) IOP CH A WRG/FMU[IOP SOL] RNG OR L(R) IOP CH B WRG/FMU[IOP SOL] RNG	<ol style="list-style-type: none"> Look for the primary / other FADEC system fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) If any of the below speed signal related fault messages is recorded, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message: - L (R) N1 SPEED CH A WRG/PROBE RNG (7326226L(R)BR) - L (R) N1 SPEED CH B WRG/PROBE RNG (7326227L(R)BR) - L (R) N2 SPEED CH A WRG/PROBE RNG (7326228L(R)BR) - L (R) N2 SPEED CH B WRG/PROBE RNG (7326229L(R)BR) If no other fault message were found and the fault message L(R) IOP CH A WRG/FMU[IOP SOL] RNG was set with the engine running, swap the N1-3 and the N1-2 speed signal on the bypass duct disconnect panel in accordance with the SFP (SMARTFIX™ Plus) below : - L (R) N1 SPEED CH B WRG/PROBE RNG (7326227L(R)BR) If no other fault message were found and the fault message L(R) IOP CH B WRG/FMU[IOP SOL] RNG was set with the engine running, swap the N1-1 and the N1-2 speed signal on the bypass duct disconnect panel in accordance with the SFP (SMARTFIX™ Plus) below : - L (R) N1 SPEED CH A WRG/PROBE RNG (7326226L(R)BR) Monitor for further fault occurrence and contact RRD for assistance. 	all

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
1	7327621L(R)BR	L (R) ARINC CH A [INPUT] IACP MA L (R) ARINC CH A [INPUT] DMCP MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	OR	OR		
2	7327622L(R)BR	L (R) ARINC CH B [INPUT] IACP MA L (R) ARINC CH B [INPUT] DMCP MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	OR	OR		
3	7327623L(R)BR	L (R) ARINC CH A [INPUT] IACS MA L (R) ARINC CH A [INPUT] DMCS MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	OR	OR		
4	7327617L(R)BR	L (R) ARINC CH A [INPUT] ADCP MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	OR	OR		
5	7327618L(R)BR	L (R) ARINC CH B [INPUT] ADCP MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	OR	OR		
6	7327619L(R)BR	L (R) ARINC CH A [INPUT] ADCS MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	OR	OR		
7	7327620L(R)BR	L (R) ARINC CH B [INPUT] ADCS MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
	OR	OR		

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
5	7327522L(R)BR	L (R) IAC [WORD1] XCK MA L (R) DMC [WORD1] XCK MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
6	7327523L(R)BR	L (R) IAC [WORD2] XCK MA L (R) DMC [WORD2] XCK MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
7	7327524L(R)BR	L (R) IAC [WORD3] XCK MA L (R) DMC [WORD3] XCK MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
8	7327525L(R)BR	L (R) IAC [WORD4] XCK MA L (R) DMC [WORD4] XCK MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all

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#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
9	7327616L(R)BR	L (R) IAC [WORD5] XCK MA L (R) DMC [WORD5] XCK MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
10	7327516L(R)BR 7327517L(R)BR	L (R) CH A AIR DATA COMPUTER T20 RNG MA L (R) CH B AIR DATA COMPUTER T20 RNG MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
11	7327526L(R)BR OR 7327527L(R)BR	L (R) IAC (TRA LEFT TRIM) XCK MA L (R) DMC (TRA LEFT TRIM) XCK MA OR L (R) IAC (TRA RIGHT TRIM) XCK MA L (R) DMC (TRA RIGHT TRIM) XCK MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
12	7327614L(R)BR	L (R) IAC (FLIGHT LEG INPUT) MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	C

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Nuisance or Misleading Fault Messages Long Term Dispatch (LTD) / Maintenance Alert (MA)				
#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
13	7327614L(R)BR	L (R) DMC (FLIGHT LEG INPUT) MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation with no other DMC related faults, no action required otherwise perform the related DMC SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	X
14	7327615L(R)BR	L (R) IAC (AIRCRAFT SERIAL NUMBER) MA L (R) DMC (AIRCRAFT SERIAL NUMBER) MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
15	7327529L(R)BR	L (R) IAC (DATE) MA L (R) DMC (DATE) MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
16	7327528L(R)BR	L (R) IAC (UNIVERSAL TIME CONST) XCK MA L (R) DMC (UNIVERSAL TIME CONST) XCK MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all

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Nuisance or Misleading Fault Messages Long Term Dispatch (LTD) / Maintenance Alert (MA)				
#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
17	7327025L(R)BR	L (R) T20 PROBE RNG MA	<p>If the faults were set with the A/C on ground, engines not running:</p> <p style="text-align: center;">Restart CAIMS / OMS No further actions are required.</p> <p>If the fault messages were flagged during normal flight operation, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	all
18	7326618L(R)BR OR 7326619L(R)BR	L (R) FMU CH A WRG/FMU[MICRO SW] DIS OR L (R) FMU CH B WRG/FMU[MICRO SW] DIS	<p style="text-align: center;">ALTERNATE / MANUAL GROUND START</p> <p>1. If either one of the fault messages was flagged during a manual engine start below 15% N2, the fault message can be regarded as a nuisance message.</p> <p>NOTE: In accordance with the Operators Instructions (OIs) Chapter 3, Normal Operation Procedure, page 3, the engine run switch has to be operated with N2 ≥ 15%.</p> <p>2. If the fault message occurs again or the engine fuel flow is not normal, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.</p>	C
19	7326714L(R)BR OR 7326715L(R)BR	L (R) EEC CH A FAULT [2] OR L (R) EEC CH B FAULT [2]	<p style="text-align: center;">NOTE: This fault message is a secondary effect.</p> <p>1. Look for the primary / other FADEC system fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages)</p> <p>2. Perform fault isolation of the primary / other FADEC system fault first.</p>	all

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Nuisance or Misleading Fault Messages Long Term Dispatch (LTD) / Maintenance Alert (MA)				
#	Fault Code	CAIMS / OMS Fault Message	Operator Action	Effectivity (EEC SW)
20	7327016L(R)BR OR 7327017L(R)BR	L (R) EEC CH A FAULT [13] OR L (R) EEC CH B FAULT [13]	<ol style="list-style-type: none"> Set the circuit breakers that follow to OUT: FADEC CH A, FADEC CH B Set the circuit breakers that follow to IN: FADEC CH A, FADEC CH B Look for the fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) <ul style="list-style-type: none"> L (R) BVSB 5.1 CH A(B) WRG/BVSB RNG (MA) L (R) BVSB 5.2 CH A(B) WRG/BVSB RNG (MA) L (R) BVSB 5.3 CH A(B) WRG/BVSB RNG (MA) L (R) BVSB 8 CH A(B) WRG/BVSB RNG (MA) <ol style="list-style-type: none"> If one of the above fault messages is shown, perform the related SFP (SMARTFIX™ Plus) troubleshooting recommendation for the applicable fault code / fault message.. The L (R) EEC CH A(B) FAULT[13] was a nuisance message. If the fault message L(R) EEC CH A(B) FAULT[13] is active, carry out EMM TASK 73-21-01-000-801 in the period of time specified in the Master Minimum Equipment List (MMEL) and Time Limits Manual (TLM). 	C
21	7326621L(R)BR	L (R) FUEL FLOW WRG/TRANSMIT RNG MA	<ol style="list-style-type: none"> Look for the fault messages on the CAIMS / OMS. For CAIMS refer to: - AMM Task 45-45-00-970-802 (Access Active Faults) - AMM Task 45-45-00-970-803 (Access Stored Faults) For OMS refer to: - AMM Task 45-47-00-970-801 (Access to view fault codes) - AMM Task 45-47-00-970-802 (Access to view Services messages) <ul style="list-style-type: none"> L (R) EEC CH A FAULT[14] - EICAS, Advisory (cyan) L(R) FADEC FAULT OR L (R) EEC CH A FAULT[1] - EICAS, Caution (amber) L(R) FADEC FAIL <ol style="list-style-type: none"> If one of the above fault messages is shown, perform EMM TASK 73-21-01-000-801 in the period of time specified in the Master Minimum Equipment List (MMEL) and Time Limits Manual (TLM). The L (R) FUEL FLOW WRG/TRANSMIT RNG MA fault message was a misleading message / secondary effect. No trouble shooting for the fuel flow transmitter fault is necessary 	C