

OPERATOR SUPPORT DEPARTMENT

FINAL INVESTIGATION REPORT

 R E F : **T08-CR0604A-1**

ENGINE FAMILY	S/N	DATE OF REPORT	WARRANTY CLAIM	COMMERCIAL FILE
ARRIUS 2B2	32155	October 30, 2008	N/A	N/A
ARRIUS 2B2	32156		N/A	N/A
OPERATOR	DATE OF ARRIVAL	REASON FOR ENGINE RETURN		
NATIONAL AIR AMBULANCE	August 1, 2008	AIRCRAFT ACCIDENT (July 31st, 2008)		
ACCIDENT	INCIDENT			
YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>			
REFERENCE ACCIDENT / INCIDENT				
2008/237				

ENGINE MODULE	S/N	WORKS PERFORMED	TOTAL HOURS	TOTAL CYCLES	HOURS SINCE OH	CYCLES SINCE OH
Engine 1	32155	TMF investigation	1170.28			
EECU	2AMN0078CE	Memory reading				
Engine2	32156	TMF investigation	1170.28			
EECU	3AMN0322CE	Memory reading				

Circumstances reported to TURBOMECA:

According to preliminary information, during an EMS mission, both engines would have stopped one after the other.

The aircraft crashed to the ground.

CONCLUSION

The analysis of the memory data of the two EECU's (Electronic Engine Control Unit) evidenced that several "failure" messages have been recorded. Based on their occurrence time (EcuTotTime), only the 2 hereafter "failure" messages were recorded during the last flight:

- The EECU S/N 3AMN0322CE had recorded an "Overspeed" message at 18 min 19s after the power-on of the EECU.
- The EECU S/N 2AMN0078CE had recorded an "OEI 2 min" message at 18 min 20s after the power-on of the EECU and an incursion into "OEI 2 min" rating for a duration of 2.64 seconds.

VALIDATION	APPROVAL
Date: 3rd of November 2008 Validated by: DVO/TEA	Date: 3rd of November 2008 Approved by: DVO/TEA

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ATTENDEES:

Investigation performed at Goodrich facility in Hartford, CT, USA.

- Janos ESZES	Transportation Safety Bureau - Aviation department - KBSZ - TSB Investigator in Charge
- Jean-Pierre SCARFO	Office of Aviation Safety - Aviation Engineering Division (AS-40) - NTSB
- Christian BERNHARDT	Manager Accident Investigation - Support & Services - ECD
- Bruce MILLAR	Electronics Product Support -Team manager - Goodrich
- Al ELDANAF	Electronics Product Support - Goodrich
- Archie WHITTEN	Accident Investigator - Accident Investigation and Safety - TM USA
- Didier LAUILHE	Electronic control unit engineer - System component and software - TM F

1 TECHNICAL REPORT

1.1 FINDINGS ON ARRIVAL:

The 2 EECU's P/N 70EMM01020 (3AMN0322CE) and P/N 70EMM01030 (2AMN0078CE) were found in good condition when recovered from the site of the event [Appendix 1 - Pictures 1 & 2]. However, the decision was made not to attempt to energize the EECU's on test bench to avoid possible further damage to the circuit boards.

The EECU's were sent to the Goodrich facility in Hartford, CT, USA, for memory reading.

1.2 FINDINGS ON TEST BENCH AT GOODRICH:

A - Memory reading of EECU S/N 2AMN0078CE from engine # 1 S/N 32155 (L/H):

- The EECU was powered on and the data downloaded without any problem. The data from this download were sent to France for analysis. A functional test was performed and did not evidence any relevant discrepancy.

Data analysis:

- The memory data exhibit that an "OEI" message was the last event recorded by the EECU [Appendix 2]. The "OEI" message was recorded at 1100 seconds (18min 20s) after the power-on of the EECU.
 - The "OEI" message parameters indicate a use of OEI 2mn rating ("Type of OEI event (OEI 2mn/OEI 30s)" bit to "1") for a duration of 2640 ms [Appendix 2, p. 26].
 - The recorded engine parameters at the moment of the "OEI" message record indicate a Max. N1 at 101.42%, Max. N2 at 99.63 % and a Max. TQ at 77.09 daN.m.
 - The discrete words indicate that the "Flight input" was active at the moment of the "OEI" message record (3 position switch in "Flight" position) - [Appendix 2, p.26].
 - No discrepancy recorded by this EECU in the "OEI" message (All bits to "0"). [Appendix 2, p. 18].

- A fault was generated on the EECU (stepper motor disconnected) at Goodrich to confirm that the current EECU total time of 214.5 hours was the same as the total time (EcuTotTime) when the "OEI" message was recorded.

B - Memory reading of EECU S/N 3AMN0322CE from engine # 2 S/N 32156 (R/H):

- The EECU was unable to communicate with the test bench due to suspected impact damage. The CPU board containing the EEPROM was removed and installed in another EECU (slave unit) and the data were downloaded. The data from this download were also sent to France for analysis. The EECU was then disassembled and the test revealed a discrepancy with the Power Printed Circuit Board. The following components were replaced:
 - Capacitor (Tantalum type) - P/N M39003/09-0254
. Disposition: Faulty.
 - Resistor (Wire Wound type) - P/N RWR81S1R00FR
. Disposition: Damaged as a result of faulty Capacitor
 - Transistor (Field Effect type or FET) - P/N JANTX2N6790
. Disposition: Damaged as a result of faulty Capacitor

After replacement of the above mentioned components, the EECU was tested and passed successfully the functional tests.

Data analysis:

- The memory data indicate that an "Overspeed" message was the last event recorded by the EECU and occurred at 1099 seconds (18min 19s) after the power-on of the EECU [Appendix .3].
 - The discrete words indicate that the "Flight input" was active at the moment of the "Overspeed" event (3 position switch in "Flight" position) - [Appendix 3, p.35] and the "Torque matching authorisation" output was also active and reflects a normal condition.
 - The recorded engine parameters at the moment of the "Overspeed" event indicate a N2 of 98.62% which is not consistent with an Overspeed condition (i.e. N2 speed greater than 114 +/- 1%) [Appendix 3, p.34]. The deterioration of the tantalum capacitor could explain the untimely activation of the "Overspeed" shut-off device.
 - No "failure" message was recorded by the EECU in the Overspeed message (All bits to "0"). [Appendix 3, p. 36].
- A fault was generated on the slave unit EECU (stepper motor disconnected) at Goodrich to confirm that the current EECU total time of 1404.0 hours was the same as the total time (EcuTotTime) when the "Overspeed" message was recorded.

Note 1: Goodrich will issue a report regarding the downloading process and functional testing of the EECU's.

Note 2: The data analysis of previous flights revealed the record of several "Failure" messages.

a) "28 Volts AIRFRAME failure"

- ✓ 6 occurrences on both engines
1 occurrence on engine n°1 (S/N 32155) (EcuTotTime = 0.1 hrs)

. Maintenance Blocks: Discrete words

- Discrete input - Bit 05 - "IDLE" input
- Discrete output - Bit 07 - "Redundancy status"
- Bit 08 - "GROUND IDLE" mode

. Maintenance Blocks: "Failure" flags

- "Failure" flag 1 - Bit 15 - "External failure" (harness or sensor)
- "Failure" flag 2 - Bit 12 - "28 Volts AIRFRAME failure"
- "Failure" flag 3 - Bit 01 - "Fault 1"

These messages indicate that the EECU's were switched-off before the engine was stopped, which is not in accordance with Flight Manual procedure (refer to § 4.10 - Engine shutdown).

- ✓ 1 occurrence on engine n° 2 (S/N 32156) - (EcuTotTime = 1386.3 hrs)

. Maintenance Blocks: Discrete words

- Discrete input - Bit 04 - "FLIGHT" input
- Discrete output - Bit 07 - "Redundancy status"

. Maintenance Blocks: "Failure" flags

- "Failure" flag 1 - Bit 15 - "External failure" (harness or sensor)
- "Failure" flag 2 - Bit 12 - "28 Volts AIRFRAME failure"
- "Failure" flag 3 - Bit 01 - "Fault 1"

As previously, these messages indicate that the EECU was switched-off before the engine was stopped.

b) "X-talk failure"

- ✓ 1 occurrence on engine n° 2 (S/N 32156) - (EcuTotTime = 1211.4hrs)

. Maintenance Blocks: Discrete words

- Discrete input - Bit 04 - "FLIGHT" input
- Discrete output - Bit 06 - "Degraded control"

. Maintenance Blocks: "Failure" flags

- "Failure" flag 2 - Bit 04 - "X-talk failure"
- "Failure" flag 3 - Bit 02 - "Fault 2"

. Maintenance Blocks: Parameters

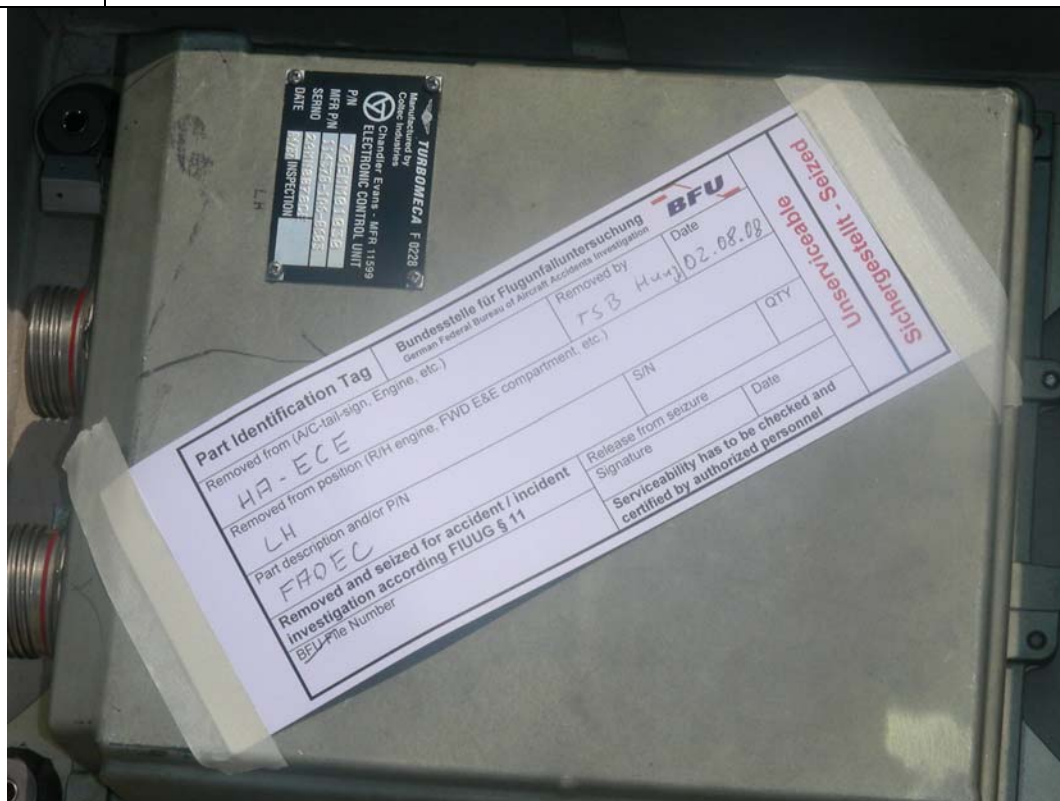
- XPC: 18% (Full Low collective pitch)
- N 2: 70.5 %
- PowOnTime: 90 s

Considering these values, the A/C was on ground.

Then, if only the engine n° 2 was running, the "X-talk failure" message was generated when the 3-position switch was moved from "IDLE" to "FLIGHT" due to the fact that the EECU of the engine n°1 was switched "OFF" with engine n° 1 stopped.

2 PICTURES

PICTURE 1 | EECU S/N 2AMN0078CE



Findings | N/A

PICTURE 1 | EECU S/N 3AMN0322CE



Findings | N/A

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Counters and Occurrences

Torque offset (daN.m)	0.16
N1 cycle counter (Cycle)	311.90
N2 cycle counter (Cycle)	842.75
Last maintenance block number (no.)	8
N1 offset counter (Cycle)	0.00
N2 offset counter (Cycle)	0.00
Counter display capacity (Cycle)	30000.00
Offset of Total OEI 2min N1 operating time (s)	0.0
Total OEI 2min N1 operating time (s)	0.0
Offset of number of OEI 2min N1 Operations (no.)	0.0
Number of OEI 2min N1 Operations (no.)	0
Offset of Total OEI 2min Torque operating time (s)	0.0
Total OEI 2min Torque operating time (s)	0.0
Offset of number of OEI 2min Torque Operations (no.)	0.0
Number of OEI 2min Torque Operations (no.)	0
Offset of Total OEI 30s N1 operating time (s)	0.0
Total OEI 30s N1 operating time (s)	0.0
Offset of number of OEI 30s N1 Operations (no.)	0.0
Number of OEI 30s N1 Operations (no.)	0
Offset of Total OEI 30s Torque operating time (s)	0.0
Total OEI 30s Torque operating time (s)	0.0
Offset of number of OEI 30s Torque Operations (no.)	0.0
Number of OEI 30sTorque Operations (no.)	0
In-flight OEI event (on/off)	1
Engine Exceed (on/off)	0
Offset of MGB Torque Exceed Counter (s)	0.0
MGB Torque Exceed Counter (s)	0.0
Last OEI context block number (no.)	1

Technical occurrences Maintenance Blocks

Block : 1 -> No occurrences
Block : 2 -> Occurrences
Block : 3 -> Occurrences
Block : 4 -> Occurrences
Block : 5 -> Occurrences
Block : 6 -> Occurrences
Block : 7 -> Occurrences
Block : 8 -> Occurrences

Technical occurrences OEI Blocks

Block : 1 -> Occurrences
Block : 2 -> No occurrences
Block : 3 -> No occurrences
Block : 4 -> No occurrences
Block : 5 -> No occurrences
Block : 6 -> No occurrences
Block : 7 -> No occurrences
Block : 8 -> No occurrences

Technical occurrences Overspeed Block

Block : 1 -> Occurrences

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
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Time	09:26:08
Place	W. hartford, USA
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Engine - Serial number	32156
EECU - Part number	70EMM01010
EECU - Serial number	2AMN0078CE

Maintenance Blocks : Parameters

EcuTotTime (h)	0.0
PowONTime (s)	0
N1 (%)	0.00
N2 (%)	0.00
P0 (mBar)	0.0
P3 (Bar)	0.000
T1 (Deg C)	0.00
T4 (Deg C)	0.0
XCP (%)	0.00
Torquemeter offset (daN.m)	0.00
Torquemeter slope	0.00
Torque (daN.m)	0.00
XR (°)	0.00
N1 demand (%)	0.00
Fuel flow demand (l/h)	0.0
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

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Engine - Serial number	32156
EECU - Part number	70EMM01010
EECU - Serial number	2AMN0078CE

Maintenance Blocks : Parameters

EcuTotTime (h)	0.1
PowONTime (s)	194
N1 (%)	68.57
N2 (%)	75.33
P0 (mBar)	1000.7
P3 (Bar)	3.023
T1 (Deg C)	23.48
T4 (Deg C)	573.8
XCP (%)	18.31
Torquemeter offset (daN.m)	-1.86
Torquemeter slope	137.28
Torque (daN.m)	6.48
XR (°)	13.45
N1 demand (%)	68.48
Fuel flow demand (l/h)	51.9
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

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EECU - Serial number	2AMN0078CE

Maintenance Blocks : Parameters

EcuTotTime (h)	51.7
PowONTime (s)	215
N1 (%)	68.95
N2 (%)	74.44
P0 (mBar)	1002.7
P3 (Bar)	3.023
T1 (Deg C)	22.33
T4 (Deg C)	563.5
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.86
Torquemeter slope	137.28
Torque (daN.m)	6.71
XR (°)	13.45
N1 demand (%)	68.82
Fuel flow demand (l/h)	51.9
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

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EECU - Part number	70EMM01010
EECU - Serial number	2AMN0078CE

Maintenance Blocks : Parameters

EcuTotTime (h)	57.7
PowONTime (s)	1111
N1 (%)	68.13
N2 (%)	76.16
P0 (mBar)	982.1
P3 (Bar)	3.069
T1 (Deg C)	11.61
T4 (Deg C)	521.8
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.88
Torquemeter slope	137.28
Torque (daN.m)	5.68
XR (°)	12.21
N1 demand (%)	68.13
Fuel flow demand (l/h)	48.6
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

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Engine - Serial number	32156
EECU - Part number	70EMM01010
EECU - Serial number	2AMN0078CE

Maintenance Blocks : Parameters

EcuTotTime (h)	65.1
PowONTime (s)	1059
N1 (%)	67.73
N2 (%)	77.32
P0 (mBar)	985.1
P3 (Bar)	3.069
T1 (Deg C)	8.44
T4 (Deg C)	517.4
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.88
Torquemeter slope	137.28
Torque (daN.m)	5.02
XR (°)	12.74
N1 demand (%)	67.66
Fuel flow demand (l/h)	49.7
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

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EECU - Serial number	2AMN0078CE

Maintenance Blocks : Parameters

EcuTotTime (h)	81.6
PowONTime (s)	756
N1 (%)	67.83
N2 (%)	77.02
P0 (mBar)	1010.2
P3 (Bar)	3.139
T1 (Deg C)	9.83
T4 (Deg C)	515.3
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.86
Torquemeter slope	137.28
Torque (daN.m)	5.43
XR (°)	12.66
N1 demand (%)	67.79
Fuel flow demand (l/h)	49.7
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

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Maintenance Blocks : Parameters

EcuTotTime (h)	89.9
PowONTime (s)	573
N1 (%)	67.94
N2 (%)	76.80
P0 (mBar)	1009.6
P3 (Bar)	3.081
T1 (Deg C)	14.66
T4 (Deg C)	525.5
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.91
Torquemeter slope	137.28
Torque (daN.m)	5.55
XR (°)	12.56
N1 demand (%)	67.88
Fuel flow demand (l/h)	49.4
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

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Maintenance Blocks : Parameters

EcuTotTime (h)	167.6
PowONTime (s)	322
N1 (%)	68.58
N2 (%)	75.01
P0 (mBar)	998.4
P3 (Bar)	2.932
T1 (Deg C)	32.59
T4 (Deg C)	584.7
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.82
Torquemeter slope	137.38
Torque (daN.m)	4.95
XR (°)	12.66
N1 demand (%)	68.59
Fuel flow demand (l/h)	49.8
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

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EECU - Serial number	2AMN0078CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	0	FLIGHT input
Bit 05 :	0	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	0	Redundancy status
Bit 08 :	0	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

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Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 1 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 1 Redundancy status
Bit 08 : 1 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
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EECU - Part number	70EMM01010
EECU - Serial number	2AMN0078CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	0	FLIGHT input
Bit 05 :	1	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	1	Redundancy status
Bit 08 :	1	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

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Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	0	FLIGHT input
Bit 05 :	1	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	1	Redundancy status
Bit 08 :	1	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name	AL Eldanaf
Company	GR
Date	09/09/2008
Time	09:26:08
Place	W. hartford, USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32156
EECU - Part number	70EMM01010
EECU - Serial number	2AMN0078CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	0	FLIGHT input
Bit 05 :	1	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	1	Redundancy status
Bit 08 :	1	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 1 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 1 Redundancy status
Bit 08 : 1 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

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Date	09/09/2008
Time	09:26:08
Place	W. hartford, USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32156
EECU - Part number	70EMM01010
EECU - Serial number	2AMN0078CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	0	FLIGHT input
Bit 05 :	1	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	1	Redundancy status
Bit 08 :	1	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
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Name AL Eldanaf
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EECU - Serial number 2AMN0078CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 1 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 1 Redundancy status
Bit 08 : 1 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
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Place W. hartford, USA
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Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 0 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 0 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 0 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

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Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
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Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
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Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name	AL Eldanaf
Company	GR
Date	09/09/2008
Time	09:26:08
Place	W. hartford, USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32156
EECU - Part number	70EMM01010
EECU - Serial number	2AMN0078CE

OEI Blocks : Parameters

EcuTotTime (h)	214.5
PowONTime (s)	1100
N1 cycle counter (Cycle)	311.90
Max. N1 (%)	101.42
Max. N2 (%)	99.63
Max. T4 (Deg C)	884.1
Max. Torque (daN.m)	77.09
Active N1_max Stop (%)	104.08
Active Torque_max Stop (daN.m)	85.64
Max. Delta N1 (%)	2.13
Duration of OEI Event (ms)	2640
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	1

OEI Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	1	FLIGHT input
Bit 05 :	0	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	0	Redundancy status
Bit 08 :	0	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

OEI Blocks : Parameters

EcuTotTime (h)	0.0
PowONTime (s)	0
N1 cycle counter (Cycle)	0.00
Max. N1 (%)	0.00
Max. N2 (%)	0.00
Max. T4 (Deg C)	0.0
Max. Torque (daN.m)	0.00
Active N1_max Stop (%)	0.00
Active Torque_max Stop (daN.m)	0.00
Max. Delta N1 (%)	0.00
Duration of OEI Event (ms)	0
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	0

OEI Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 0 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 0 Redundancy status
Bit 08 : 0 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

OEI Blocks : Parameters

EcuTotTime (h)	0.0
PowONTime (s)	0
N1 cycle counter (Cycle)	0.00
Max. N1 (%)	0.00
Max. N2 (%)	0.00
Max. T4 (Deg C)	0.0
Max. Torque (daN.m)	0.00
Active N1_max Stop (%)	0.00
Active Torque_max Stop (daN.m)	0.00
Max. Delta N1 (%)	0.00
Duration of OEI Event (ms)	0
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	0

OEI Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 0 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 0 Redundancy status
Bit 08 : 0 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

OEI Blocks : Parameters

EcuTotTime (h)	0.0
PowONTime (s)	0
N1 cycle counter (Cycle)	0.00
Max. N1 (%)	0.00
Max. N2 (%)	0.00
Max. T4 (Deg C)	0.0
Max. Torque (daN.m)	0.00
Active N1_max Stop (%)	0.00
Active Torque_max Stop (daN.m)	0.00
Max. Delta N1 (%)	0.00
Duration of OEI Event (ms)	0
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	0

OEI Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 0 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 0 Redundancy status
Bit 08 : 0 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

OEI Blocks : Parameters

EcuTotTime (h)	0.0
PowONTime (s)	0
N1 cycle counter (Cycle)	0.00
Max. N1 (%)	0.00
Max. N2 (%)	0.00
Max. T4 (Deg C)	0.0
Max. Torque (daN.m)	0.00
Active N1_max Stop (%)	0.00
Active Torque_max Stop (daN.m)	0.00
Max. Delta N1 (%)	0.00
Duration of OEI Event (ms)	0
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	0

OEI Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 0 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 0 Redundancy status
Bit 08 : 0 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

OEI Blocks : Parameters

EcuTotTime (h)	0.0
PowONTime (s)	0
N1 cycle counter (Cycle)	0.00
Max. N1 (%)	0.00
Max. N2 (%)	0.00
Max. T4 (Deg C)	0.0
Max. Torque (daN.m)	0.00
Active N1_max Stop (%)	0.00
Active Torque_max Stop (daN.m)	0.00
Max. Delta N1 (%)	0.00
Duration of OEI Event (ms)	0
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	0

OEI Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 0 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 0 Redundancy status
Bit 08 : 0 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

OEI Blocks : Parameters

EcuTotTime (h)	0.0
PowONTime (s)	0
N1 cycle counter (Cycle)	0.00
Max. N1 (%)	0.00
Max. N2 (%)	0.00
Max. T4 (Deg C)	0.0
Max. Torque (daN.m)	0.00
Active N1_max Stop (%)	0.00
Active Torque_max Stop (daN.m)	0.00
Max. Delta N1 (%)	0.00
Duration of OEI Event (ms)	0
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	0

OEI Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 0 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 0 Redundancy status
Bit 08 : 0 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name	AL Eldanaf
Company	GR
Date	09/09/2008
Time	09:26:08
Place	W. hartford, USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32156
EECU - Part number	70EMM01010
EECU - Serial number	2AMN0078CE

OEI Blocks : Parameters

EcuTotTime (h)	0.0
PowONTime (s)	0
N1 cycle counter (Cycle)	0.00
Max. N1 (%)	0.00
Max. N2 (%)	0.00
Max. T4 (Deg C)	0.0
Max. Torque (daN.m)	0.00
Active N1_max Stop (%)	0.00
Active Torque_max Stop (daN.m)	0.00
Max. Delta N1 (%)	0.00
Duration of OEI Event (ms)	0
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	0

OEI Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	0	FLIGHT input
Bit 05 :	0	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	0	Redundancy status
Bit 08 :	0	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name	AL Eldanaf
Company	GR
Date	09/09/2008
Time	09:26:08
Place	W. hartford, USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32156
EECU - Part number	70EMM01010
EECU - Serial number	2AMN0078CE

Overspeed Block : Parameters

EcuTotTime (h)	57.7
PowONTime (s)	0
N1 (%)	31.63
N2 (%)	48.67
P0 (mBar)	983.4
P3 (Bar)	1.321
T1 (Deg C)	11.92
T4 (Deg C)	291.9
Pitch (%)	18.00
Torquemeter offset (daN.m)	-1.84
Torquemeter slope	137.35
Torque (daN.m)	-5.80
XR (°)	5.53
N1 demand (%)	0.00
Fuel flow demand (l/h)	0.0
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Overspeed Block : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 0 IDLE input
Bit 06 : 1 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 0 Redundancy status
Bit 08 : 0 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_2AMN0078CE_1.dmp

Name AL Eldanaf
Company GR
Date 09/09/2008
Time 09:26:08
Place W. hartford, USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32156
EECU - Part number 70EMM01010
EECU - Serial number 2AMN0078CE

Overspeed Block : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 0 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 0 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 0 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name AI ELdanaf
Company GR
Date 09/09/2008
Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

Counters and Occurrences

Torque offset (daN.m)	-0.16
N1 cycle counter (Cycle)	1930.69
N2 cycle counter (Cycle)	5025.71
Last maintenance block number (no.)	4
N1 offset counter (Cycle)	-0.33
N2 offset counter (Cycle)	0.92
Counter display capacity (Cycle)	30000.00
Offset of Total OEI 2min N1 operating time (s)	0.0
Total OEI 2min N1 operating time (s)	0.0
Offset of number of OEI 2min N1 Operations (no.)	0.0
Number of OEI 2min N1 Operations (no.)	0
Offset of Total OEI 2min Torque operating time (s)	-11.3
Total OEI 2min Torque operating time (s)	11.3
Offset of number of OEI 2min Torque Operations (no.)	-33.0
Number of OEI 2min Torque Operations (no.)	34
Offset of Total OEI 30s N1 operating time (s)	0.0
Total OEI 30s N1 operating time (s)	0.0
Offset of number of OEI 30s N1 Operations (no.)	0.0
Number of OEI 30s N1 Operations (no.)	0
Offset of Total OEI 30s Torque operating time (s)	0.0
Total OEI 30s Torque operating time (s)	0.0
Offset of number of OEI 30s Torque Operations (no.)	0.0
Number of OEI 30s Torque Operations (no.)	0
In-flight OEI event (on/off)	1
Engine Exceed (on/off)	0
Offset of MGB Torque Exceed Counter (s)	0.0
MGB Torque Exceed Counter (s)	0.0
Last OEI context block number (no.)	6

Technical occurrences Maintenance Blocks

Block : 1 -> Occurrences
Block : 2 -> Occurrences
Block : 3 -> Occurrences
Block : 4 -> Occurrences
Block : 5 -> Occurrences
Block : 6 -> Occurrences
Block : 7 -> Occurrences
Block : 8 -> Occurrences

Technical occurrences OEI Blocks

Block : 1 -> Occurrences
Block : 2 -> Occurrences
Block : 3 -> Occurrences
Block : 4 -> Occurrences
Block : 5 -> Occurrences
Block : 6 -> Occurrences
Block : 7 -> Occurrences
Block : 8 -> Occurrences

Technical occurrences Overspeed Block

Block : 1 -> Occurrences

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	Al ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Parameters

EcuTotTime (h)	1271.1
PowONTime (s)	756
N1 (%)	67.72
N2 (%)	76.99
P0 (mBar)	1009.1
P3 (Bar)	3.001
T1 (Deg C)	10.09
T4 (Deg C)	520.1
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.24
Torquemeter slope	133.24
Torque (daN.m)	6.89
XR (°)	12.30
N1 demand (%)	67.79
Fuel flow demand (l/h)	48.9
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	Al ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Parameters

EcuTotTime (h)	1279.4
PowONTime (s)	573
N1 (%)	67.78
N2 (%)	76.79
P0 (mBar)	1006.9
P3 (Bar)	3.013
T1 (Deg C)	13.58
T4 (Deg C)	528.8
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.25
Torquemeter slope	133.24
Torque (daN.m)	7.08
XR (°)	12.30
N1 demand (%)	67.88
Fuel flow demand (l/h)	48.9
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	Al ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Parameters

EcuTotTime (h)	1357.1
PowONTime (s)	326
N1 (%)	68.60
N2 (%)	75.05
P0 (mBar)	998.0
P3 (Bar)	2.828
T1 (Deg C)	32.39
T4 (Deg C)	584.7
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.24
Torquemeter slope	133.24
Torque (daN.m)	6.69
XR (°)	12.83
N1 demand (%)	68.59
Fuel flow demand (l/h)	50.2
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	Al ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Parameters

EcuTotTime (h)	1386.3
PowONTime (s)	1156
N1 (%)	82.22
N2 (%)	96.45
P0 (mBar)	991.1
P3 (Bar)	4.428
T1 (Deg C)	28.82
T4 (Deg C)	641.1
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.31
Torquemeter slope	133.31
Torque (daN.m)	18.51
XR (°)	38.23
N1 demand (%)	85.13
Fuel flow demand (l/h)	121.3
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	Al ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Parameters

EcuTotTime (h)	1211.4
PowONTime (s)	90
N1 (%)	74.38
N2 (%)	70.50
P0 (mBar)	997.4
P3 (Bar)	3.519
T1 (Deg C)	28.70
T4 (Deg C)	590.1
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.25
Torquemeter slope	133.24
Torque (daN.m)	13.64
XR (°)	22.50
N1 demand (%)	120.00
Fuel flow demand (l/h)	78.8
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	Al ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Parameters

EcuTotTime (h)	1241.2
PowONTime (s)	219
N1 (%)	68.96
N2 (%)	74.41
P0 (mBar)	1002.8
P3 (Bar)	2.978
T1 (Deg C)	22.46
T4 (Deg C)	566.2
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.24
Torquemeter slope	133.24
Torque (daN.m)	8.87
XR (°)	13.97
N1 demand (%)	68.84
Fuel flow demand (l/h)	53.5
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	Al ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Parameters

EcuTotTime (h)	1247.2
PowONTime (s)	1111
N1 (%)	68.13
N2 (%)	76.16
P0 (mBar)	982.4
P3 (Bar)	2.909
T1 (Deg C)	11.29
T4 (Deg C)	527.1
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.25
Torquemeter slope	133.29
Torque (daN.m)	7.19
XR (°)	11.86
N1 demand (%)	68.13
Fuel flow demand (l/h)	47.7
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	Al ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Parameters

EcuTotTime (h)	1254.6
PowONTime (s)	1065
N1 (%)	67.73
N2 (%)	77.27
P0 (mBar)	986.2
P3 (Bar)	3.001
T1 (Deg C)	8.88
T4 (Deg C)	530.4
XCP (%)	18.00
Torquemeter offset (daN.m)	-1.25
Torquemeter slope	133.27
Torque (daN.m)	6.80
XR (°)	12.74
N1 demand (%)	67.69
Fuel flow demand (l/h)	49.7
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	AI ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	0	FLIGHT input
Bit 05 :	1	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	1	Redundancy status
Bit 08 :	1	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name AI ELdanaf
Company GR
Date 09/09/2008
Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 1 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 1 Redundancy status
Bit 08 : 1 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name AI ELdanaf
Company GR
Date 09/09/2008
Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 1 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 1 Redundancy status
Bit 08 : 1 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	AI ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	1	FLIGHT input
Bit 05 :	0	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	1	Redundancy status
Bit 08 :	0	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	AI ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	1	FLIGHT input
Bit 05 :	0	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	1	Degraded control
Bit 07 :	0	Redundancy status
Bit 08 :	0	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name AI ELdanaf
Company GR
Date 09/09/2008
Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 1 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 1 Redundancy status
Bit 08 : 1 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

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Maintenance Blocks : Discrete words

Discrete inputs

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Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 0 FLIGHT input
Bit 05 : 1 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 1 Redundancy status
Bit 08 : 1 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
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Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Maintenance Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	0	FLIGHT input
Bit 05 :	1	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	1	Redundancy status
Bit 08 :	1	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

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Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

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Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

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Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

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Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

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Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 0 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 0 Fault 1
Bit 02 : 1 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 1 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 0 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

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Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
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Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

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EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name AI ELdanaf
Company GR
Date 09/09/2008
Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

Maintenance Blocks : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 1 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 1 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 1 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name AI ELdanaf
Company GR
Date 09/09/2008
Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

OEI Blocks : Parameters

EcuTotTime (h)	713.4
PowONTime (s)	1465
N1 cycle counter (Cycle)	1001.41
Max. N1 (%)	101.22
Max. N2 (%)	101.00
Max. T4 (Deg C)	889.8
Max. Torque (daN.m)	80.85
Active N1_max Stop (%)	103.75
Active Torque_max Stop (daN.m)	85.12
Max. Delta N1 (%)	2.24
Duration of OEI Event (ms)	14520
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	1

OEI Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 1 FLIGHT input
Bit 05 : 0 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 0 Redundancy status
Bit 08 : 0 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

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Company GR
Date 09/09/2008
Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

OEI Blocks : Parameters

EcuTotTime (h)	713.4
PowONTime (s)	1465
N1 cycle counter (Cycle)	1001.41
Max. N1 (%)	101.22
Max. N2 (%)	101.00
Max. T4 (Deg C)	889.8
Max. Torque (daN.m)	80.85
Active N1_max Stop (%)	103.75
Active Torque_max Stop (daN.m)	85.12
Max. Delta N1 (%)	2.24
Duration of OEI Event (ms)	51120
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	1

OEI Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	1	FLIGHT input
Bit 05 :	0	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	1	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	1	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	0	Redundancy status
Bit 08 :	0	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	1	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
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Company GR
Date 09/09/2008
Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

OEI Blocks : Parameters

EcuTotTime (h)	713.4
PowONTime (s)	1465
N1 cycle counter (Cycle)	1001.41
Max. N1 (%)	101.22
Max. N2 (%)	101.00
Max. T4 (Deg C)	889.8
Max. Torque (daN.m)	80.85
Active N1_max Stop (%)	103.75
Active Torque_max Stop (daN.m)	85.12
Max. Delta N1 (%)	2.24
Duration of OEI Event (ms)	20280
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	1

OEI Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	1	FLIGHT input
Bit 05 :	0	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	0	Redundancy status
Bit 08 :	0	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	1	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name AI ELdanaf
Company GR
Date 09/09/2008
Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

OEI Blocks : Parameters

EcuTotTime (h)	713.4
PowONTime (s)	1465
N1 cycle counter (Cycle)	1001.41
Max. N1 (%)	101.22
Max. N2 (%)	101.00
Max. T4 (Deg C)	889.8
Max. Torque (daN.m)	80.85
Active N1_max Stop (%)	103.75
Active Torque_max Stop (daN.m)	85.12
Max. Delta N1 (%)	2.24
Duration of OEI Event (ms)	12120
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	1

OEI Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	1	FLIGHT input
Bit 05 :	0	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	1	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	1	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	1	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	0	Redundancy status
Bit 08 :	0	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	0	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name AI ELdanaf
Company GR
Date 09/09/2008
Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

OEI Blocks : Parameters

EcuTotTime (h)	713.4
PowONTime (s)	1465
N1 cycle counter (Cycle)	1001.41
Max. N1 (%)	101.22
Max. N2 (%)	101.00
Max. T4 (Deg C)	889.8
Max. Torque (daN.m)	80.85
Active N1_max Stop (%)	103.75
Active Torque_max Stop (daN.m)	85.12
Max. Delta N1 (%)	2.24
Duration of OEI Event (ms)	110880
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	1

OEI Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 1 FLIGHT input
Bit 05 : 0 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 0 Redundancy status
Bit 08 : 0 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 1 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	Al ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

OEI Blocks : Parameters

EcuTotTime (h)	713.4
PowONTime (s)	1465
N1 cycle counter (Cycle)	1001.41
Max. N1 (%)	101.22
Max. N2 (%)	101.00
Max. T4 (Deg C)	889.8
Max. Torque (daN.m)	80.85
Active N1_max Stop (%)	103.75
Active Torque_max Stop (daN.m)	85.12
Max. Delta N1 (%)	2.24
Duration of OEI Event (ms)	3480
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	1

OEI Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	1	FLIGHT input
Bit 05 :	0	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	0	Redundancy status
Bit 08 :	0	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	1	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name AI ELdanaf
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Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

OEI Blocks : Parameters

EcuTotTime (h)	0.0
PowONTime (s)	0
N1 cycle counter (Cycle)	0.00
Max. N1 (%)	0.00
Max. N2 (%)	0.00
Max. T4 (Deg C)	-60.0
Max. Torque (daN.m)	-25.00
Active N1_max Stop (%)	-240.00
Active Torque_max Stop (daN.m)	-25.00
Max. Delta N1 (%)	-10.00
Duration of OEI Event (ms)	24840
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	0

OEI Blocks : Discrete words

Discrete inputs

Bit 01 : 0 Spare
Bit 02 : 0 Spare
Bit 03 : 0 FMU out of neutral position
Bit 04 : 1 FLIGHT input
Bit 05 : 0 IDLE input
Bit 06 : 0 STOP input
Bit 07 : 0 OEI 30s/2min topping selection
Bit 08 : 0 MANUAL input
Bit 09 : 0 Torque offset decrease input
Bit 10 : 0 Torque offset increase input
Bit 11 : 0 Spare
Bit 12 : 0 OEI TRAINING mode input
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Category A mode input
Bit 16 : 0 Spare

Discrete outputs

Bit 01 : 0 TRAINING FLIGHT mode
Bit 02 : 0 TRAINING IDLE mode
Bit 03 : 0 MANUAL mode
Bit 04 : 0 Training authorisation
Bit 05 : 0 2min OEI Topping
Bit 06 : 0 Degraded control
Bit 07 : 0 Redundancy status
Bit 08 : 0 GROUND IDLE mode
Bit 09 : 0 Engine exceed
Bit 10 : 0 Total failure
Bit 11 : 0 Torque matching authorisation
Bit 12 : 0 Engine/helicopter limit exceedence
Bit 13 : 0 Power-up self test
Bit 14 : 0 Category A mode selected
Bit 15 : 0 Mixed mode
Bit 16 : 0 P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name	Al ELdanaf
Company	GR
Date	09/09/2008
Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

OEI Blocks : Parameters

EcuTotTime (h)	713.4
PowONTime (s)	1465
N1 cycle counter (Cycle)	1001.41
Max. N1 (%)	101.22
Max. N2 (%)	101.00
Max. T4 (Deg C)	889.8
Max. Torque (daN.m)	80.85
Active N1_max Stop (%)	103.75
Active Torque_max Stop (daN.m)	85.12
Max. Delta N1 (%)	2.24
Duration of OEI Event (ms)	5520
Duration of MGB-Torque Exceedance (ms)	0
Type of OEI Event (OEI 2min/OEI 30s)	1

OEI Blocks : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	1	FLIGHT input
Bit 05 :	0	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	0	Redundancy status
Bit 08 :	0	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	1	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

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Company	GR
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Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Overspeed Block : Parameters

EcuTotTime (h)	1404.0
PowONTime (s)	1099
N1 (%)	86.65
N2 (%)	98.62
P0 (mBar)	988.4
P3 (Bar)	4.703
T1 (Deg C)	31.44
T4 (Deg C)	764.2
Pitch (%)	62.25
Torquemeter offset (daN.m)	-1.28
Torquemeter slope	133.34
Torque (daN.m)	19.58
XR (°)	49.30
N1 demand (%)	97.91
Fuel flow demand (l/h)	147.8
OS_IBIT_RAW (A)	0.000
VOS_RAW (V)	0.00

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
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Time	11:22:02
Place	W. Hartford USA
Engine - Designation	ARRIUS 2B2
Engine - Serial number	32155
EECU - Part number	70EMM01010
EECU - Serial number	3AMN0322CE

Overspeed Block : Discrete words

Discrete inputs

Bit 01 :	0	Spare
Bit 02 :	0	Spare
Bit 03 :	0	FMU out of neutral position
Bit 04 :	1	FLIGHT input
Bit 05 :	0	IDLE input
Bit 06 :	0	STOP input
Bit 07 :	0	OEI 30s/2min topping selection
Bit 08 :	0	MANUAL input
Bit 09 :	0	Torque offset decrease input
Bit 10 :	0	Torque offset increase input
Bit 11 :	0	Spare
Bit 12 :	0	OEI TRAINING mode input
Bit 13 :	0	Spare
Bit 14 :	0	Spare
Bit 15 :	0	Category A mode input
Bit 16 :	0	Spare

Discrete outputs

Bit 01 :	0	TRAINING FLIGHT mode
Bit 02 :	0	TRAINING IDLE mode
Bit 03 :	0	MANUAL mode
Bit 04 :	0	Training authorisation
Bit 05 :	0	2min OEI Topping
Bit 06 :	0	Degraded control
Bit 07 :	0	Redundancy status
Bit 08 :	0	GROUND IDLE mode
Bit 09 :	0	Engine exceed
Bit 10 :	0	Total failure
Bit 11 :	1	Torque matching authorisation
Bit 12 :	0	Engine/helicopter limit exceedence
Bit 13 :	0	Power-up self test
Bit 14 :	0	Category A mode selected
Bit 15 :	0	Mixed mode
Bit 16 :	0	P3 bleed interdiction

INTERFACE SOFTWARE FOR EECU ARRIUS 2B2
Technical occurrences (ARINC 429) - TL0115G103
70EMM01010_3AMN0322CE_1.dmp

Name AI ELdanaf
Company GR
Date 09/09/2008
Time 11:22:02
Place W. Hartford USA
Engine - Designation ARRIUS 2B2
Engine - Serial number 32155
EECU - Part number 70EMM01010
EECU - Serial number 3AMN0322CE

Overspeed Block : Failure flags

Failure flags 1

Bit 01 : 0 Stepper motor: loss of step
Bit 02 : 0 XCP consistency failure
Bit 03 : 0 Selector failure
Bit 04 : 0 N2 Trim failure
Bit 05 : 0 Collective pitch failure
Bit 06 : 0 T45 channel failure
Bit 07 : 0 T1 channel failure
Bit 08 : 0 P3 channel failure
Bit 09 : 0 Torque channel failure
Bit 10 : 0 Torque conformation failure
Bit 11 : 0 Delta N1 indication failure
Bit 12 : 0 Torque offset trim input failure
Bit 13 : 0 Torque indication failure
Bit 14 : 0 Internal failure (EECU)
Bit 15 : 0 External failure (harness or sensor)
Bit 16 : 0 P0 failure

Failure flags 3

Bit 01 : 0 Fault 1
Bit 02 : 0 Fault 2
Bit 03 : 0 RAM fault
Bit 04 : 0 PROM fault
Bit 05 : 0 Watchdog init fault
Bit 06 : 0 Slow task loss
Bit 07 : 0 Fast task loss
Bit 08 : 0 Background task loss
Bit 09 : 0 Conf table error (Config_Fit)
Bit 10 : 0 Serial link fault
Bit 11 : 0 EEPROM fault
Bit 12 : 0 Spare
Bit 13 : 0 Actuator blocking power supply fault
Bit 14 : 0 Actuator displacement demand fault
Bit 15 : 0 12 bits A/D converter fault
Bit 16 : 0 8 bits A/D converter fault

Failure flags 5

Bit 01 : 0 Overspeed triggered (OS3_VBIT)
Bit 02 : 0 Overspeed triggered (OS4_VBIT)
Bit 03 : 0 O.S. system fault (OS_SYS_FLT)
Bit 04 : 0 O.S. current measurement fault (VOS_VALID)
Bit 05 : 0 O.S. power supply fault (VOS_VALID)
Bit 06 : 0 Spare
Bit 07 : 0 Spare
Bit 08 : 0 Spare
Bit 09 : 0 Spare
Bit 10 : 0 Spare
Bit 11 : 0 Spare
Bit 12 : 0 Spare
Bit 13 : 0 Spare
Bit 14 : 0 Spare
Bit 15 : 0 Spare
Bit 16 : 0 Spare

Failure flags 2

Bit 01 : 0 Resolver channel failure
Bit 02 : 0 Stepper motor channel failure
Bit 03 : 0 CAT A switch fault
Bit 04 : 0 X-talk failure
Bit 05 : 0 N2 B channel failure
Bit 06 : 0 N1 B channel failure
Bit 07 : 0 N2 A channel failure
Bit 08 : 0 2min OEI topping selection consistency failure
Bit 09 : 0 Training switch consistency failure
Bit 10 : 0 P0 consistency failure
Bit 11 : 0 Alternator failure
Bit 12 : 0 28 Volts AIRFRAME failure
Bit 13 : 0 Non volatile RAM full
Bit 14 : 0 Fuel shut off Electro-valve failure
Bit 15 : 0 P3 shift or engine flame-out
Bit 16 : 0 T1 consistency failure

Failure flags 4

Bit 01 : 0 F/D converter fault (N1a/N2b)
Bit 02 : 0 F/D converter fault (Tq2/IMP count)
Bit 03 : 0 F/D converter fault (N1b/N2a)
Bit 04 : 0 Low alternator voltage (<10V)
Bit 05 : 0 Phase A actuator Vbit error
Bit 06 : 0 Phase B actuator Vbit error
Bit 07 : 0 Phase C actuator Vbit error
Bit 08 : 0 Phase D actuator Vbit error
Bit 09 : 0 Actuator current fault (SMIBiT)
Bit 10 : 0 N1A continuity fault
Bit 11 : 0 N2A continuity fault
Bit 12 : 0 N2B continuity fault
Bit 13 : 0 TQ2 continuity fault
Bit 14 : 0 Chopped power supply inactive
Bit 15 : 0 5V power supply fault
Bit 16 : 0 15V power supply fault