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| Logo Europrop_ | **COMPONENT DEFINITION ALTERATION REQUEST** |

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| **CDAR NUMBER :** | | **CDAR042-17-0001** | | | | | | **Section A** |
| **REQUESTED BY:** | | | | | | | | |
| GE AVIO | ITP | | MTU | RR | SN | UMBRA | EPI | |

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| **DECISION** | | | | | **Section B** |
| ACCEPTED | | | REJECTED | | |
| The proposed alteration is classified as “MINOR without substantiation” in accordance with  OI-42N0900-E-EP-08-0011. Justification is provided in Section “F” and “G”. | | | | | |
| FUNCTION | PLOT NAME | SIGNATURE | | DATE | |
| Classification Confirmation |  |  | |  | |
| Designated Compliance Verification Engineer | Bruno Gardias |  | |  | |
| PC or DS CDE | N/A | N/A | |  | |
| EPI CDE | Aitor Bertolin |  | |  | |
| EPI Airworthiness Release | Volker Zierahn |  | |  | |
| Author | Marco Nardeschi |  | | 27/03/17 | |
| Specialist 2 |  |  | |  | |

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| DEFINITION NO. AND CURRENT ISSUE | | DEFINITION TITLE | TOP LEVEL ASSEMBLY NUMBER | CLASSIFICATION | | |  | **Section C** |
| Critical | Sensitive | Unclassified |  |  |
| SCHEME NUMBER | |
| TP190234 |  | Propeller Brake Control Unit -08 | TP190234 |  |  | X | EPID190022 | |
| TP190225 |  | Propeller Brake Control Unit -07 | TP190225 |  |  | X | EPID190019 | |
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| **REASON FOR ALTERATION (SELECT AT LEAST ONE)** | | **Section D** |
| COST REDUCTION OR MANUFACTURING EASEMENT  ELIMINATE RECURRING CONCESSIONS  CORRECT ERROR OR OMISSION  OBSOLESCENSE OF COMPONENTS / MATERIALS | ADD ALTERNATIVE MATERIAL / SPECIAL PROCESS  UPDATE ARRANGEMENT DRAWINGS  UPDATE BUILD INSTRUCTIONS  OTHER REASON, DESCRIBE BELOW: Acceptance Test Procedure update | |
| **ADDITIONAL COMMENTS (ie reclassification decision if applicable)** | | |

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| **ALTERATION INSTRUCTIONS** | | **SECTION E** |
| List all the part numbers and drawing zone references necessary to describe the alterations, including illustrations if required.  Alternatively attach your own Design Suppliers alteration instructions as required. | | |
| CHANGE FROM: - | CHANGE TO: - | |
| **ATP0184 rev. E**  No text  **ATP0184 rev. F**  Section 4    Section 5.1    Section 5.2      Section 5.3      Section 5.4    Section 5.5    Section 5.6      Section 5.7  No picture  Section 7    **ATP0184 rev. G** | **ATP0184 rev. F**  Added section 4 to check P/N and S/N sent on CAN Bus    **ATP0184 rev. G**  Section4    Section 5.1    Section 5.2      Section 5.3    Section 5.4    Section 5.5    Section 5.6    Section 5.7        Section 7  Removed PBU from ESS test rig    **ATP0184 rev. H**  Test rig N0636 replaced by new test rig N0876 | |

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| **STANDARDISATION** | | | | | **SECTION F** | |
| IF “YES” IS TICKED FOR ANY OF THE FOLLOWING CONSIDERATIONS, JUSTIFICATION MUST BE PROVIDED ON THE NEXT PAGE. | | | | | | |
| 1. Will the proposed alteration have an adverse effect on**:** | | | | | | |
| Safety | Yes | No | Aircraft Installation / Customer Interface | Yes | | No |
| Reliability | Yes | No | Test Schedules | Yes | | No |
| Failure Analysis | Yes | No | Maintainability / Repair / Spares | Yes | | No |
| Starting / Handling | Yes | No | Interchangeability / Function | Yes | | No |
| Declared Service Life | Yes | No | Environment | Yes | | No |
| Engine Performance / Operability | Yes | No | Special Service Tools | Yes | | No |
| Structural Strength | Yes | No | Exhaust Emissions | Yes | | No |
| Noise | Yes | No | Fuel Venting | Yes | | No |
| Other Characteristics affecting the Airworthiness of the Product | Yes | No | Engine Qualification Requirements | Yes | | No |
| 2. Will the proposed alteration change or introduce new or alternative materials or special processes? | | | | Yes | | No |
| 3. Will already delivered components be non-conforming to the new issue of the specification? | | | | Yes | | No |
| 4. Will the proposed alteration have an effect on**:** | | | | | | |
| Utility Parts / Standard Parts | Yes | No | Appearance including Colour | Yes | | No |
| Mass / Balance / Moment of Inertia | Yes | No | Unit, Module or Aircraft Interfaces | Yes | | No |
| Limitations approved by the Agency (EASA) | Yes | No |  |  | |  |
| 5. Will the proposed alteration require: | | | | | | |
| Evaluation Testing | Yes | No | Additional Engineering Analysis | Yes | | No |
| Aircraft Trial Installation | Yes | No |  |  | |  |
| 6. Will the proposed alteration introduce oscillations which could coincide / excite rotating component vibratory modes? | | | | Yes | | No |
| 7. Are Critical Parts affected or does the alteration affect a functional or geometric interface to a critical part? | | | | Yes | | No |
| If yes, a DVE signature is required on the front page. Please answer the following questions:- | | | | | | |
| Will the proposed alteration have an effect on CS-E 515 documentation (engineering plan, manufacturing plan, life summary report including declared lives or service management plan)? | | | | Yes | | No |
| Is a material and or geometry change requested? | | | | Yes | | No |
| 8. Is there a service requirement to distinguish the parts made to the old from the one’s made to the new specification? | | | | Yes | | No |
| 9. Does the alteration affect complex electronic components? | | | | Yes | | No |
| 10. Will amendments be required for**:** | | | | | | |
| Regulatory Documents | Yes | No | Ground Support Equipment | Yes | | No |
| Technical Manuals | Yes | No | Operational Instructions | Yes | | No |
| 11. Does the proposed alteration contradict the original design intent as described on the scheme? | | | | Yes | | No |

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| **JUSTIFICATION**  Provide justification directly or in an attached report.  Dd | **SECTION G** |
| 1. **Introduction**   ATP0184 rev. E was standardized with P/N 190225 standardization process.  Due to documentary evolutions and a new P/N 190234 , ATP has been released in revision H  The purpose of this document is to reconcile the ATP last version (rev. H) with the one standardized.  Based on the following technical justification, document modification introduced after Standardization didn’t have any adverse effect on the capability of Acceptance Test Procedure to intercept potentially issue during PBCU manufacturing process:   1. **Introduction**   ATP0184 rev. E was standardized with P/N 190225 standardization process.  Due to documentary evolutions and a new P/N 190234 , ATP has been released in revision H  The purpose of this document is to reconcile the ATP last version (rev. H) with the one standardized.  Based on the following technical justification, document modification introduced after Standardization didn’t have any adverse effect on the capability of Acceptance Test Procedure to intercept potentially issue during PBCU manufacturing process:   1. **ATP evolutions** 2. ATP0184 rev. E to rev. F (20/05/2014)   ATP rev. F has been updated to add section 4 “P/N and S/N verification”.  This modification increase the coverage of ATP with two additional check.  These verifications P/N and S/N was already done in the ATR (page 23/25), this is documentation correction.     1. ATP0184 rev. F to rev. G (27/06/2014)   ATP rev. G has been updated   * Addition of picture and visual information to help operators during the ATP execution * Power off consumption changed from 50mA to 60mA because 50mA is too much conservative limit and has no impact on maximum consumption during power off state.. Test described in section 5.5 are dedicated to verify the HW circuit involved in the reading of speed sensors located in the PBU (called Hall\_A and Hall\_B).   Section 5.5.3 was removed because:   * + requested test was a fault injection test dedicated to verify a specific software feature.   + hardware used in section 5.5.3 (PBCU Propeller Speed sensor reading circuit) are already tested in section 5.5.1 and 5.5.2 * PBU removed from ESS Test rig, because PBU in not in the scope of this ATP. Dynamic braking test (engage and release) was removed by ESS because:   + dynamic performances are tested by a dedicated test step (refer to ATP0184 section 5.8)   + during ESS only functional test was performed, no measurement is performed during dynamic braking   + PBCU electronic is fully powered in stand-by mode, then the removal of dynamic braking sequence didn’t reduce the coverage of ATP in terms of capability the intercept component infant mortality and process issue (e.g. cold welding).   + No failure was reported during ESS dynamic braking on PBCU –07 | |
| 1. ATP0184 rev. G to rev. H (26/08/2016)    * Test rig N0876 operation was tested using two PBCU (S/N 00252 and S/N01024) previously checked with old test rig (N0636), refer to N0876(10-2016.pdf document).    * Test rig N0876 is an evolution of test rig N0636.   Note: PBCU TP190225 will be tested with the old test bench N0636. Last revision (Rev H) of PBCU ATP did not apply to PBCU TP190225 and is applicable to TP190234 only.   1. **Conclusion**   Applicable to PBCU TP190225 and TP190234 :  The ATP rev. F is only documentation corrections.  The ATP rev. G improves the coverage of the procedure.  Applicable to PBCU TP190234 :  The last ATP rev. H introduced PBCU P/N EPI TP190234 and a new test bench N0876. The test bench N0876 is able to perform the test described in ATP0184 rev. H with no regression compared to old test bench. | |