Perform Air International Inc.
Administrative System Manual
Procedure III.35: Engineering Order (EO) Procedure

Revision	Revision Date	Revision Change
N/I	02/08/10	Initial Release/Re-release
1	12/31/10	Revision to pages 2 thru 5 – header correction, 5.0 – Corrected numbering of procedure, 5.1.1- Grammar correction and 6.0 – Removal of form location
2	09/18/12	Revised Paragraph 5.1.3. Addition of Paragraphs 5.1.7.1 thru 5.1.7.3.
3	07/01/13	Pagination of 3.1 thru 3.4 for consistency of format. Revision to procedure for clarification of responsibility and grammar.
4	04/30/15	Revision to 3.1, 3.2, 3.4, 3.4.2, 3.4.3 and 5.3 for title change.
5	07/31/17	Repagination of 4.1.1 thru 4.3.1 for better flow. Revision to 5.1.7.1 for clarification of procedure.
6	02/28/18	Revision to 5.1.7.2 , 6.1, 6.2
7	04/30/21	Revision for clarification of process/form in 5.1, 5.1.1, 5.1.6.2, 6.1

1.0 Purpose:

The Engineering Order (EO) is used by Engineering as a means of issuing formal repair instructions/drawings, materials, specifications, or other disposition, to correct a damaged or unserviceable condition on an aircraft or component.

2.0 Scope:

An EO is required and shall be issued for Maintenance to accomplish all permanent repairs not covered by an Air Carrier's Maintenance Program, Manufacturer's Maintenance or Overhaul Manual, or other approved or acceptable data. Repairs involving the replacement with same or equivalent parts do not require an EO.

3.0 Responsibility:

3.1 The maintenance of this procedure is the responsibility of the Executive Vice President Engineering.

3.2 Executive Vice President Engineering is responsible to ensure this procedure is utilized for the development and implementation of approved/acceptable repair data.

3.3 Contract FAA Designated Engineering Representatives (DER) authorized for the system the repair relates to will be used for approval of data.

3.4 In cases where contract DER is utilized, EO's may be prepared by the contract DER at the request of Executive Vice President Engineering. EO's generated in this manner are subject to the following approval process:

3.4.1 Contract DER work must conform to the relevant Perform Air International Inc. Engineering practices and applicable procedures.

3.4.2 Contract DER must provide their qualifications and experience to the Executive Vice President Engineering for review and acceptance.

3.4.3 The Contract DER and preparing Engineer must be identified on the EO. Each EO with all supporting data must be received by the Executive Vice President Engineering or designee prior to release.

3.5 Qualifications:

3.5.1 To be eligible to authorize an EO, all of the following qualifications must be met:

3.5.1.1 A Perform Air International Inc. engineer must have an engineering degree from an accredited university or a minimum of 5 years applicable experience.

3.5.1.2 For degreed engineers, a minimum of one year applicable experience.

4.0 Definitions:

4.1 Repair Substantiation

4.1.1 The following are acceptable means of substantiation, but not the only means.

4.1.1.1 Applicable Advisory Circulars

4.1.1.2 FAA/Industry recognized documents and specifications (i.e. MIL, MPDS, manufacturer's design standards handbooks and specs, ARINC and SAE publications).

4.1.1.3 OEM data such as Service Bulletins, Service Letters, All Operator Letters, Telexes and Letters, and Manufacturer' Drawings.

4.1.1.4 Previous approvals using acceptable data.

4.1.1.5 Approved data can be used as acceptable data.

4.2 Minor Repairs: The following are examples of acceptable data to substantiate minor repairs.

4.2.1 Each EO determined to be Minor shall be supported by acceptable documentation which must be included in the EO file. "Approved" means approved by the Air Carrier customer and incorporated into that Air Carriers Maintenance Program. The approved Air Carrier Maintenance Documentation must be listed on the EO in the FAA/DER area.

Note: If an air carrier or OEM maintenance manual exists for the discrepancy, concurrence to authorize a less restrictive limit must be obtained from the air carrier engineering department or manufacturer and on file in Engineering prior to return to service.

Note: Boeing data for Airbus components or Airbus data for Boeing components must not be used unless concurrence by the OEM is received or unless the application is substantiated using the methods of this section.

4.3 Major Repairs:

4.3.1 Each EO determined to be Major shall be supported by approved documentation which must be included in the EO file. "Approved" means approved by the Airworthiness Authority, i.e. FAA, FAA DER, Boeing Delegated Compliance Organization (BDCO), French GSAC or French GSAC Delegate. "Approval Documentation" means FAA Form 8110-3, 8100-9 or other document chosen by the FAA, i.e. STC, Field Approval, AMOC letter, or FAA Approved drawings. The source of the major approval must be listed on the EO in the FAA/DER area.

Note: All Major Repairs must be approved by the respective customer prior to use or incorporation.

5.0 Procedures:

5.1 Completion of Engineering *Order*

5.1.1 Upon receipt of a request for repair, through the Design and Development Procedure, existing OEM manuals, such as AMM, CMM, in addition to any specialized manuals applicable to the damaged part or component will be reviewed to verify if an existing repair exists. If no repair exists or a repair in the manual cannot be accomplished as written, the Engineer may develop an EO to provide those repair(s)/dispositions(s) necessary to return the damaged component to an airworthy condition. *The EO document/format will be as directed in current FAA guidance for an RS-DER repair.*

5.1.2 Each EO shall include, in addition to processes and techniques necessary to perform the repair, all pertinent special tools, equipment, materials, weight and balance effects if not "negligible," specifications and limitations.

5.1.3 Each EO will be assigned a unique number. The EO number will begin with a two-digit indicator of the year generated, followed by a unique four-digit sequence, followed by the first initial of the generating engineer, ended with the letters "ER." For example: 10-0619-PER.

5.1.4 The Engineer shall initial and date the Engineering Order and/or the Engineering Checklist while reviewing the repair.

5.1.5 The Engineer will indicate the classification of the repair by checking the appropriate box. To classify the repair, it is necessary to complete the analysis indicated on Major/Minor Repair Logic Diagram. A copy of this completed form is to be signed and filed with the original EO paperwork.

5.1.6 Typical Repair:

5.1.6.1 It is to be decided by the Engineer preparing the EO, whether the repair is unique to a particular component, aircraft or engine; or if the repair is "typical" to other aircraft or components of the same model.

5.1.6.2 EO's defined as typical may be used on multiple airplanes or components of the same model with similar discrepancies. *Typical repairs will be in FAA RS-DER repair format.*

5.1.7 EO's may be revised. Such revision can be made on a new sheet or copy or the original. Replace previous revision letter when making further revision. A summary of the changes and reason for the changes should be listed on the form. Revisions are subject to the same approval process as the original. An EO may be cancelled by revising it to include the word CANCELLED in large letters into the number.

5.1.7.1 Once an EO is revised, the EO revision number will be displayed on the Record of Revision located on page 2 of all PAI EO's.

5.1.7.2 All previous revised packages or cancelled EO's shall be removed from the active files and electronic technical data and archived in the Engineering share drive.

5.1.7.3 Once an EO is approved and acceptable for use, a mechanic's note will be inserted into the applicable technical data to notify all personnel of its availability.

5.2 Release of Preliminary EO's:

5.2.1 In some instances, Engineering may release preliminary EO's to expedite repair, maintenance, or parts ordering processes. These documents may only be used to proceed with the process described within the document; however no preliminary document may be used to authorize a component for return to service.

5.2.2 EO number will be the word "PRELIMINARY". Documents released as preliminary will not have an EO number assigned. Preliminary documents will not have signatures in the approval blocks.

5.2.3 Final release of the document may have requirements not specified in the preliminary release. These items must be addressed prior to component return to service.

5.3 The Executive Vice President Engineering will be responsible for maintaining control of preliminary EOs, by retaining the preliminary copy in the respective project file.

5.4 It is the responsibility of the individual using the preliminary document to dispose of any copies once the approved document is released. Furthermore, it is the responsibility of the Quality Control Inspector or individual releasing the component for return to service to ensure no preliminary documents have been used in the accomplishment of maintenance

6.0 : Records

6.1 Engineering *Repair* Checklist (Form 67.03)
6.2 Major/Minor Logic Diagram (Form 67.05)