

QUALITY REMARK: MED

STANDARD REMARK F04

GUIDE FOR PREPARATION OF MASTER ENVELOPE DEFINITION (MED) BY DESIGN VENDORS. MED INCLUDES PRODUCT DEFINITION DATA SETS (PDDS) (FORMALLY KNOWN AS DRAWINGS) AND MODELS.

1.0 SCOPE

THIS GUIDE DEFINES THE REQUIREMENT FOR USE BY VENDORS IN THE PREPARATION OF A MASTER ENVELOPE DEFINITION(MED) IN CONJUNCTION WITH THE GE PREPARED DESIGN PROCUREMENT DEFINITION(DPD). THIS GUIDE ALSO CONTAINS THE VENDOR'S REQUIREMENT FOR MAINTAINING AND CONTROLLING CHANGES TO THE MED.

2.0 DEFINITIONS

DESIGN PROCUREMENT DEFINITION (DPD): A GE PREPARED PRODUCTION DEFINITION DATA SET (PDDS) THAT INVOKES THE GE DESIGN SPECIFICATION AND ESTABLISHES THE PROCUREMENT IDENTITY FOR THE ITEM. THE DPD INVOKES THE VENDOR PREPARED MASTER ENVELOPE DEFINITION (MED) AS THE CONTROLLING DOCUMENTATION FOR THE GRAPHICALLY DISPLAYED REQUIREMENTS.

MASTER ENVELOPE DEFINITION (MED): A VENDOR PREPARED AND MAINTAINED PRODUCT DEFINITION DATA SET (PDDS) (IN ACCORDANCE WITH THE VENDOR'S PDDS SYSTEM AND CERTAIN GE ACCEPTABILITY REQUIREMENTS) AND MODEL THAT CONTROLS THE EXTERNAL ENVELOPE BOUNDRIES AND DETAILS OF THE PHYSICAL INTERFACE (INCLUDING APPLICABLE INTERFACE FEATURES SUCH AS ELECTRICAL CONNECTOR RECEPTACLES). IT SHALL BE UNDER GEAE APPROVED CHANGE CONTROL AS DEFINED IN THE APPLICABLE DESIGN SPECIFICATION (AND IMPLEMENTED IN ACCORDANCE WITH APPLICABLE OPERATING PROCEDURES). GE AEROSPACE SHALL HAVE THE UNRESTRICTED RIGHT TO USE, COPY, AND DISCLOSE THIS PDDS AND MODEL.

3.0 MED PREPARATION REQUIREMENTS

FORMAT: TO BE PREPARED ON VENDOR'S FORMAT IN ACCORDANCE WITH VENDOR'S PDDS SYSTEM.

GOVERNING DOCUMENT: VENDOR'S PDDS SYSTEM FOR MED'S SHALL COMPLY WITH ASME Y14.5- 2009

LEGIBILITY: MED'S PDDS SHALL HAVE CLEAR LEGIBILITY OF THE LETTERING FONTS AND DELINEATION AFTER IMAGING, WITH SPECIAL ATTENTION ON COMPUTER GENERATED LETTERING. THIS WILL BE APPROVED BY GE AEROSPACE.

4.0 MED CONTENT REQUIREMENTS

THE MED PDDS SHALL INCLUDE THE FOLLOWING:

- (a) TOLERANCED DIMENSIONAL CONTROL OF THE MOUNTING INTERFACES AND OTHER HARD POINT INTERFACES, SUCH AS PORTS AND CONNECTORS.
- (b) A MODEL REFERENCED ON THE MED PDDS WHICH DEFINES THE COMPLETE NOMINAL ENVELOPE.
- (c) LIMITS OF TRAVEL, REMOVAL ENVELOPE, SERVICE POINTS, AND WHEN APPLICABLE, PART NUMBERS FOR FASTENERS AND THE ASSOCIATED TORQUE VALUES.
- (d) THE MARKING LOCATION AND WHEN APPLICABLE, REQUIREMENT FOR SERIALIZATION. THE PROCUREMENT IDENTITY IS BASED UPON THE DPD PDDS, NOT THE MED PDDS; THEREFORE, THE MARKING SHALL INCLUDE THE VENDOR PART IDENTIFICATION NUMBER, BUT NOT THE MED PDDS NUMBER.
- (e) COMPLETE COMPATIBILITY WITH THE VENDOR'S ASSEMBLY PDDS, UPON WHICH THE VENDOR'S PART IDENTIFICATION NUMBER THAT IS SPECIFIED ON THE DPD PDDS IS BASED.
- (f) THE FOLLOWING LEGEND ABOVE THE TITLE BLOCK:

GE AEROSPACE SHALL HAVE THE UNRESTRICTED RIGHT TO USE, COPY, AND DISCLOSE THIS PRODUCT DEFINITION DATA SET AND THE ASSOCIATED MODEL(S) REFERENCED HEREIN.

- (g) THE FOLLOWING MAXIMUM ENVELOPE GENERAL NOTE:

THE MODEL(S) REFERENCED ON THIS PRODUCT DEFINITION DATA SET ESTABLISHES THE NOMINAL EXTERNAL SHAPE OF THE ITEM(S). UNLESS OTHERWISE DIMENSIONED, THE MAXIMUM SPATIAL ENVELOPE FOR THE ITEM(S) EXTENDS .13 BEYOND THE BOUNDARIES OF THE MODEL(S).

- (h) UNLESS ALLOWED BY CONTRACT, AN MED PDDS AND ANY ASSOCIATED MODELS SHALL BE PREPARED IN SUCH A MANNER TO HAVE AN EXPORT STATUS OF "NO LICENSE REQUIRED (NLR)", I.E., AN MED SHALL NOT CONTAIN LICENSE REQUIRED (LR) DATA. EXPORT NOTATIONS SHALL NOT CONFLICT WITH GOVERNMENT JURISDICTION AND EXPORTABILITY LAWS. AN MED SHALL INCLUDE AN EXPORTABILITY NOTE. FOR EXAMPLE:

THIS PRODUCT DEFINITION DATA SET CONTAINS TECHNICAL DATA WHICH IS CONTROLLED UNDER THE EXPORT ADMINISTRATION REGULATION. ANY TRANSFER TO A NON-US PERSON OR EXPORT FROM THE UNITED STATES SHALL BE IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATION. DIVERSION CONTRARY TO US LAW IS PROHIBITED.

5.0 MED COMPATIBILITY REQUIREMENTS

VENDOR PDDS: THE MED SHALL BE KEPT CURRENT WITH THE DESIGN STATUS OF THE VENDOR'S PDDS, WHICH ESTABLISHES THE VENDOR'S PART IDENTIFICATION NUMBER.

DESIGN PROCUREMENT DEFINITION: THE MED SHALL BE KEPT CURRENT WITH THE DPD.

INTERFACE DEFINITION: A GE AEROSPACE APPROVED AND ISSUED MED IDENTIFIED ON A DPD ESTABLISHES THE DEFINITIVE INTERFACES.

6.0 PDDS APPROVAL REQUIREMENTS

GE AEROSPACE APPROVAL

1. PRIOR TO ISSUANCE, VENDOR SHALL SUBMIT COPY TO GEAE ENGINEERING FOR REVIEW.
2. AFTER ALL GE COMMENTS ARE RESOLVED, VENDOR SHALL SUBMIT A FINAL PRINT FOR APPROVAL.
3. GEAE SOURCING OR AN AGREED UPON PARTY WILL NOTIFY VENDOR OF GE APPROVAL FOR ISSUANCE. THE VENDOR IS NOT PERMITTED TO ISSUE THE MED PRIOR TO RECEIVING GEAE APPROVAL, WHICH IS OBTAINED FROM GE SOURCING, ENGINEERING, ETC.

VENDOR APPROVAL

1. AFTER NOTIFICATION OF GE AEROSPACE APPROVAL, VENDOR SHALL ISSUE MED INTO THEIR RELEASE SYSTEM WITH ALL REQUIRED VENDOR APPROVALS ON ALL DRAWING GRAPHIC SHEETS (DGS), AND IMPLEMENT THE REQUIRED DISTRIBUTION, WHICH INCLUDES IMMEDIATE COPIES TO GE AEROSPACE.
2. GEAE'S COPY MUST BE IN A FORM OF AN ELECTRONIC IMAGE. REGARDLESS OF TYPE, THE MEDIA MUST MEET RASTERIZATION REQUIREMENTS (SEE 3.0 FOR LEGIBILITY).

PDDS INTEGRITY: THE PDDS LOCATED IN THE VENDOR DATABASE, COMPUTER, ETC. MUST BE 100% COMPATIBLE WITH THE GEAE ISSUED COPY WITH NO EXCEPTIONS.

7.0 MED MODEL REQUIREMENTS

FOR A VENDOR MODEL, THE FOLLOWING APPLIES:

- (a) THE MODEL SHALL REPRESENT THE NOMINAL EXTERNAL SHAPE OF THE COMPONENT.
- (b) WHEN THE ITEM IS AN ASSEMBLY WITH REPLACEABLE COMPONENTS, THE MODEL SHALL BE STRUCTURED SUCH THAT THE REPLACEABLE COMPONENTS ARE MODELED AS INDEPENDENT COMPONENT FILES.
- (c) MODELS SHALL NOT CONTAIN INTERNAL OR NON-VISIBLE FEATURES, E.G. INTERNAL PASSAGES.

- (d) MODELS SHALL INCLUDE MARKING LOCATION INFORMATION, E.G., PART NUMBER MARKING, FLOW ARROWS, SAFETY WARNINGS, TO ENSURE MARKING WILL BE VISIBLE WHEN INSTALLED ON AN ENGINE.
- (e) MODELS SHALL CONSIST OF SOLID BODIES AND WHEN POSSIBLE, MODELS SHALL BE TRANSFERRED IN NX® FORMAT. WHEN THE VENDOR CANNOT PROVIDE MODELS IN NX® FORMAT, MODELS SHALL BE TRANSFERRED IN THE VENDOR'S NATIVE DESIGN FORMAT ALONG WITH A COPY IN THE STANDARD FOR THE EXCHANGE OF PRODUCT MODEL DATA (STEP) FORMAT.
- (f) AS NEEDED, ADDITIONAL MODELS SHOWING LIMITS OF TRAVEL, REMOVAL ENVELOPE AND SERVICE POINTS SHALL BE PROVIDED.

VENDOR MODELS SHALL BE UNIQUELY NAMED TO ESTABLISH A HISTORY RECORD OF THE MODELS RECEIVED BY GE AEROSPACE. THE MODEL SHALL BE NAMED AS FOLLOWS:

- (a) THE MED PDDS NUMBER SHALL BE USED AS THE MODEL NAME.
- (b) INCLUDE A REVISION. REVISION MAY BE SEQUENTIAL, CONSIST OF A DATE, E.G., YYMMDD, OR FOLLOW VENDOR'S SYSTEM SCHEMA.
- (c) THE NAME AND REVISION SHALL ONLY CONTAIN ALPHA-NUMERIC CHARACTERS, DASHES, AND UNDERSCORES.
- (d) THE CHARACTER LENGTH OF THE NAME AND REVISION SHALL BE A MAXIMUM OF 32 CHARACTERS.
- (e) THE EXCHANGED FILENAME SHALL BE <MODEL NAME>_<REVISION>.<EXTENSION>.
- (f) WHEN A MODEL HAS BEEN SHARED WITH GE AEROSPACE, IT MAY NOT BE REVISED WITHOUT A CORRESPONDING NAME OR REVISION CHANGE, AND THE MED PDDS SHALL BE UPDATED ACCORDINGLY.
- (g) WHEN A MODEL IS REVISED, THE VENDOR SHALL PROVIDE GE AEROSPACE THE UPDATED MODEL FILE WITHIN 14 DAYS.

8.0 MED CHANGE CONTROL

DESIGN SPECIFICATION: THE MED SHALL BE UNDER CHANGE CONTROL IN ACCORDANCE WITH THE GE DESIGN SPECIFICATION.

GE PRIOR APPROVAL: ALL CHANGES TO A MED SHALL BE SUBMITTED TO GE FOR PRIOR APPROVAL AND ARE EXCLUDED FROM THE DESIGNATED VENDOR DESIGN CHANGE PROGRAM. THE MED IS A GE/VENDOR CO-RESPONSIBLE DRAWING AND SHALL NOT BE CHANGED BY EITHER PARTY WITHOUT THE OTHER'S APPROVAL.

CHANGE INITIATION: THE VENDOR MAY REQUEST A CHANGE TO A MED BY SUBMITTING A RDC TO GEAE CONFIGURATION CONTROL. GE MAY ALSO REQUEST CHANGES TO A MED BY IDENTIFYING THE CHANGE AND REQUESTING THE VENDOR TO SUBMIT A RDC.

CHANGE APPROVAL: AFTER RECEIVING GE APPROVAL OF A RDC, THE VENDOR SHALL UPDATE THE MED, ADVANCE THE REVISION LETTER, AND IF REQUESTED, SUBMIT A PRINT FOR GE REVIEW. AFTER GE APPROVAL, THE VENDOR SHALL ISSUE THE DRAWING AND IMPLEMENT THE REQUIRED DISTRIBUTION INCLUDING GEAE'S COPY. AGAIN, THE VENDOR IS NOT PERMITTED TO ISSUE THE MED PRIOR TO RECEIVING GEAE SOURCING APPROVAL WHICH IS OBTAINED FROM GE ENGINEERING, ETC.

9.0 RIGHTS TO DATA

UNRESTRICTED, NON-PROPRIETARY: THE VENDOR SHALL FURNISH, ON AN UNRESTRICTED, NONPROPRIETARY BASIS, THE MED PDDS AND MODEL (ORIGINAL ISSUE PLUS ALL SUBSEQUENT REVISIONS).

STATEMENTS: NO STATEMENTS OF ANY KIND THAT COULD BE INTERPRETED AS PROPRIETARY RIGHTS ARE PERMITTED ON THE MED PDDS OR IN MODEL. ANY STATEMENT OF THIS NATURE MUST BE REMOVED IN ITS ENTIRETY PRIOR TO ISSUING AT THE VENDOR'S LOCATION AND SUBSEQUENTLY AT GEAE.