

**GP11 – GENERAL PROCEDURE FOR PRE-PRODUCTION/PROTOTYPE PARTS**

This GP11 procedure specifies the uniform minimum source warrant part quality certification requirements for all internal and external suppliers to Allison Transmission, Inc. of Pre-Production/Prototype parts that have NOT received PPAP (Production Part Approval Process) approval. Should subsequent salable production be necessary, all AIAG PPAP requirements must be met.

The purpose of the Allison Transmission, Inc. GP11 source warrant part quality certification is to support the Allison Transmission, Inc. Pre-Production/Prototype Transmission Development Activity.

The intent of the Pre-Production/Prototype Transmission Development Activity is to assemble and test production intent parts, assembly systems and vehicles for design and assembly process validation.

The availability and awareness of the GP11 source warrant part quality certification information during the Pre-Production/Prototype Activity ensures part problems are easily identified and corrected to minimize the impact of part variation upon design evaluation, manufacturing, and assembly.

All Pre-Production/Prototype GP11 source warrant part quality certification shall be in accordance with requirements set forth in this procedure. The term “supplier” shall be used to indicate the prime contractor (Tier 1 Supplier) to Allison Transmission, Inc. Tier 1 suppliers are responsible to apply GP11 requirements to subcontractors.

Pre-Production/Prototype source warrant certification must be submitted per the instructions of the respective Allison Transmission, Inc. requestor definitions:

This procedure contains the following:

1-0 PRE- PRODUCTION/PROTOTYPE PART QUALITY CERTIFICATION DOCUMENTATION REQUIREMENTS

2-0 SUBMISSION REQUIREMENTS

3-0 SHIPPING METHODS

4-0 RECORD RETENTION REQUIREMENTS

5-0 GP-11 Documents List and Appendix

**1-0** PRE-PRODUCTION/PROTOTYPE PART QUALITY CERTIFICATION DOCUMENTATION REQUIREMENTS - Parts are to be made to ATI authorized drawings, templates, models and/or other engineering design records, using specified part(s). For deviation from engineering requirements, contact ATI for formal authorization. ALL SUPPLIERS OF PRE-PRODUCTION/PROTOTYPE PARTS ARE REQUIRED TO HAVE COMPLETED, DOCUMENTED AND AVAILABLE FOR REVIEW THE ITEMS LISTED BELOW.

1. Allison Transmission, Inc. Supplier Warrant Part for Pre-Production/Prototype (AT-1826-1)

2. Design Records

3. Inspection Results and Inspection &/ or Test Devices

4. Part Certification

5. Part Weight (Mass)

6. Serialization Information

7. Production Material & Processes

1-1 ALLISON TRANSMISSION, INC. SUPPLIER SOURCE WARRANT OF PART QUALITY FOR PRE-PRODUCTION/PROTOTYPE - Allison Transmission, Inc. Pre-Production/Prototype part source warrant certification documentation must be completed in full and signed by an authorized Product Engineering or Quality official of the supplier who is responsible for the stated quality certification. There shall be a separate warrant form for each part number and each part shipment to Allison Transmission, Inc.

If parts do not meet specifications but are deemed usable for the Pre-Production/Prototype by an ATI Engineer, the Corrective Action Plan document (AT-1826-2) must be completed in full and signed by the ATI Engineer prior to the shipment of parts to the ATI receiving location. (Reference AT-1826-1 for step-by-step instructions on how to complete the warrant.)

1-2 DESIGN RECORD

-Design records can include but are not limited to sketches, marked prints, math data, blueprints, and other auxiliary drawings (i.e., GDT - Drawing). The part number, design record number, design record date, change revision number and the ATI responsible engineer’s signature, shall appear on the above, except in the electronic release process. Functional requirements are those items specified on the design records.

1-3 INSPECTION RESULTS AND INSPECTION &/OR TEST DEVICE - Suppliers are responsible for performing, or having performed, the inspections and/or tests required to substantiate conformance to design record, coordinate measuring machine (CMM) printout or facsimile. These actual measurements must be cross-referenced to the design record supplied by the customer, or the design record utilized to inspect the part. (Dimensional results for CMM inspected parts are to be documented as referenced in the Appendix of this document.)

1-3A. Complete Characteristic Inspection,

1-3B. Critical Characteristic Inspection,

1-3C. Engineering Change Inspection,

1-3D. Assemblies and Detail Parts,

1-3E. Inspection and/or Testing Devices (When requested).

1-3A COMPLETE CHARACTERISTIC INSPECTION

 - A complete inspection shall be conducted on three (3) parts unless otherwise specified by ATI. The three (3) parts should be selected from start, middle, and end of the manufacturing process.

1-3B CRITICAL CHARACTERISTIC INSPECTION - On all parts produced in excess of the quantity specified in 1-3A, measurements of key characteristic inspection points when specified on the design record, shall be checked for conformance to requirements, unless otherwise specified by ATI.

1-3C ENGINEERING CHANGE INSPECTION -

Submission requirements because of an engineering change or a correction to the original part only require that the changed portion and any other area affected by the change, be inspected. The results shall be available for review by ATI and submitted when requested.

1-3D ASSEMBLIES AND DETAIL PARTS - When inspecting and/or testing an assembly, all dimensions and specifications shown on the assembly design record shall be checked. The supplier is responsible for the acceptability of each detail component and shall furnish evidence of conformance to requirements when requested to do so by ATI.

1-3E INSPECTION AND/OR TESTING DEVICES - When an inspection and/or testing device such as a gage, fixture, check-aid, or template is used to inspect and/or test a part, the supplier is responsible for inspecting and verifying that the device has been constructed to the same engineering release and change number as the part being inspected and/or tested.

Suppliers are expected to use an appropriate method to inspect parts. CMM inspection may be required.

Supplementary inspection sheets need to include part number, design record level, design record date, and supplier’s name.

1-4 MATERIAL CERTIFICATION - The material certification is a document from the material producer that states manufacturing location, lot number, product identification number, product name, dates of test, and test data required to show compliance to the ATI product specifications. Material certification shall be on file at the supplier location and available for review by ATI and submitted when requested.

1-5 PART UNIT WEIGHT (MASS) - The supplier is to furnish part unit weight (mass) data for each individual part number supplied to Allison Transmission, Inc. The weight (mass) is to be expressed in kilograms to the third decimal (0.000) and reported on the Pre-Production/Prototype part source warrant certification document (i.e., AT-1826-1). A minimum of ten (10) parts are to be individually weighed and the results averaged. In instances of parts weighing less than 0.1 kg., such as fasteners, etc., a quantity of ten (10) pieces should be weighted together and the results divided by ten for reporting purposes. If the quantity of parts ordered is less than 10, weigh the available quantity to establish an average weight. Parts are to be weighed less lubricants, coolants, etc.

1-6 SERIALIZATION INFORMATION - Parts shall be numerically serialized and referenced to test/inspection results. Serial numbers shall begin with S-0001 and continue in sequence through the last part shipped. Placement of the serial number on each part shall not affect the appearance, fit or function of the part. Design records, test results, and supplementary inspection result sheets must have the part serial numbers(s) clearly indicated. Part serialization is required unless otherwise specified by the ATI procuring division.

1-7 PRODUCTION MATERIAL AND PROCESSES- When production material and the complete production process is utilized the supplier should begin to complete requirements of the Production Part Approval Process. Consult your ATI Supplier Quality Engineer for direction.

GENERAL INFORMATION

PRODUCTION APPROVED PARTS are governed by the Production Part Approval Process (PPAP) and are exempt from the documentation requirements stated in this procedure. PPAP status parts do not require GP11 tags or labels. However, the carton/lot/rack must be clearly identified with the ATI Part Number and Quantity shipped.

2-0 SUBMISSION REQUIREMENTS - ATI will specify the submission requirements. Suppliers not informed of the submission requirements should follow the procedures specified in 2-1, level B. For all submission requirements, the following shall be directed to the location designated by ATI:

1. The completed Allison Transmission, Inc. Supplier Warrant of Material for Pre-Production/Prototype (AT-1826-1) (henceforth described as “the Warrant").
2. A completed Corrective Action Plan (AT-1826-2) signed by the ATI Release Engineer when parts do not meet the design record requirements.

When parts are nonconforming, ATI may require additional documentation beyond what is described above.

Note:

Reference attached matrix (Appendix, Exhibit C).

All suppliers of Pre-Production/Prototype parts are required to have completed, documented, and retained on file, all requirements listed in section 1.0, regardless of the submission level.

2-1 PARTS SHIPPED DIRECTLY TO RECEIVING LOCATION

LEVEL A PARTS SHIPPED DIRECTLY TO DESIGNATED RECEIVING LOCATION. WARRANT DESIGNATED BY ATI.

Parts, which are tagged and labeled as described in sections 3.2 and 3.3, shall be shipped by the supplier to the receiving location designated on the purchase order. The warrant shall be directed to the location designated by ATI.

LEVEL B PARTS SHIPPED DIRECTLY TO THE DESIGNATED RECEIVING LOCATION. COMPLETE DOCUMENTATION DIRECTED TO LOCATION DESIGNATED BY ATI.

Parts, which are tagged and labeled as described in sections 3.2 and 3.3, shall be shipped by the supplier to the receiving location designated on the purchase order. The warrant, design records, and inspection results shall be directed to the location designated by ATI. If parts do not meet specification, the supplier must contact the Pre-Production/Prototype Coordinator to request a part disposition prior to shipment of material. Suppliers shipping nonconforming parts to the receiving location without a part disposition are subject to rejection and will be documented.

2-2 EVALUATION AND AUTHORIZATION TO SHIP GIVEN BY ATI PRIOR TO SHIPMENT TO THE RECEIVING LOCATION

LEVEL C WARRANT WITH CORRECTIVE ACTION PLAN (IF NECESSARY) ONLY.

Prior to shipment of parts to the receiving location, the warrant shall be directed to the location designated by ATI. ATI will issue a part disposition, which is authorization for part shipments. Parts, which are tagged and labeled as described in sections 3.2 and 3.3, shall be shipped by the supplier, without documentation, to the receiving location designated on the purchase order.

LEVEL D PARTS WITH COMPLETE DOCUMENTATION AND INSPECTION/TEST DEVICE, IFREQUESTED

Prior to shipment of parts to the receiving location, the warrant,design records, inspection results, inspection devices (if requested) and the number of parts specified by ATI shall be directed to the location designated by ATI.Part shipments will be authorized after ATI issues a part disposition. Parts, which are tagged and labeled as described in sections 3.2 and 3.3, shall be shipped by the supplier, without documentation, to the receiving location designated on the purchase order.

PART CLASSIFICATION - The supplier shall be notified by ATI as to the disposition of the submission.

1). APPROVED FOR PRE-PRODUCTION/PROTOTYPE - This status indicates that the supplier has a manufactured part that conforms to all specifications. This is NOT a production approval.

2). USABLE FOR PRE-PRODUCTION/PROTOTYPE - This status permits the usage of the nonconforming part. A corrective action plan is required and must be signed by the ATI Design Release or Quality Engineer.

3). REJECTED FOR PRE-PRODUCTION/PROTOTYPE This status indicates that parts failed to meet requirements. Corrected parts shall be reevaluated prior to shipment.

3-1 SHIPPING METHODS - Suppliers are to ship parts using the approved shipping method specified by ATI. Shipping methods must provide traceability.

All suppliers shipping material to Allison Transmission, Inc., shall indicate the following on the shipper:

1. Part number, suffix level and serial number
2. Pre-Production/Prototype Purchase Order number
3. Shipment weight
4. Quantity of parts
5. Fixture number of any fixtures accompanying shipment
6. Date shipped

3-2 PART IDENTIFICATION – All identification forms can be found in the Supplier Forms section of the Allison public website. Each part must be identified with the ATI part number and the serial number. Utilize the Pre-Production/Prototype Part Tag (AT-1828) or approved facsimile. On small parts, such as fasteners, where individual part identification is not practical, the identification of the part number and serial number on each part is not required.

3-3 SHIPPING CONTAINER LABELING - All containers must be identified with a Pre-Production/Prototype Container Label (AT-1827) and/or printed copy of the GP-11 PSW.

4.0 RECORD RETENTION REQUIREMENTS

All suppliers of Pre-Production/Prototype parts are required to have completed, documented and available for review the items listed in section 1.0. Records for Pre-Production/Prototype parts for a specified model year shall be retained by the supplier for two (2) months after the start of regular production for that model.

5.0 GP-11 Documents List and Appendix

All relevant GP-11 documents can be found in the Supplier Forms section of Allison Transmission public website.

 Relevant GP-11 Documents:

 AT-1826-1: GP-11 Warrant

 AT-1826-2: Corrective Action Plan

 AT-1827: Pre-Production/Prototype Container Label

 AT-1828: Pre-Production/Prototype Part Tag

 Appendix:

 Exhibit A GP11 Submission Requirements

 Exhibit B Example of CMM Inspection Results

**APPENDIX, EXHIBIT A**

## GP11 SUBMISSION REQUIREMENTS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | LEVEL A | LEVEL B | LEVEL C | LEVEL D |
|  | SHIP DIRECT TORECEIVING LOCATION | EVALUATE BY ATIPRIOR TO SHIPMENT |
| PARTS | **X** | **X** |  | **X** |
| WARRANT(AT-1826-1) | **X** | **X** | **X** | **X** |
| DESIGN RECORD |  | **X** |  | **X** |
| INSPECTION RESULTS |  | **X** |  | **X** |
| INSPECT RESULTS1 | MAINTAIN ON FILE |
| INSPECTION DEVICE |  |  |  | **X** |
| PART CERTIFICATION | MAINTAIN ON FILE |
| CORRECTIVE ACTION PLAN(s) 2(AT-1826-2) | **X** | **X** | **X** | **X** |

NOTES:

1 Required for production part and processes.

2 Required if parts do not meet specs. Must have authorized signature from ATI Release Engineer

All records listed in Section 1-0 of the GP11 procedure shall be retained, by the supplier, for a minimum period of two (2) months beyond start of production for each specific model year (regardless of submission level). Inspection results must be cross-referenced to the design record.

**APPENDIX, EXHIBIT B**

### EXAMPLE: REPORTING RESULTS FOR CMM INSPECTED PARTS

The following example demonstrates the proper method of reporting inspection results for CMM inspected parts. A drawing must be "ballooned" to indicate where data points were inspected to ensure compliance to the dimensional call-out. If a drawing is not available, then a pictorial representation of the part should be used. A description of the inspection results should also be included by each dimensional call-out which was out of spec. For example, Trim line checks low from .845 to 1.147.

Data points from the CMM printout or data check sheet must be referenced on the drawing/pictorial to indicate which data points were used to verify compliance to the dimensional call-out in question. For example, reference points 31-34. Additionally, a checkmark must be placed on the drawing/pictorial, next to reference points, when results are, within specification. Any features which were not inspected on the CMMshould have actual measurements recorded via the check drawing, method per the Pre-Production & Production Part Approval Process. For example, 4.99 DIA per gage pin.

The part pictured below is used to demonstrate the proper method of reporting inspection results for a surface, trim line, and hole,

and is not intended to represent a complete dimensional inspection report.

