Below are the minimum requirements to be incorporated into the manufacturing process for all GPS commodities. The expectation is for GM to receive parts that meet 100% of the specifications as defined by GM. It is understood that advances in technology may require modifications to the following requirements to ensure state of the art processing and testing. It is the responsibility of the supplier to ensure that the process meets or exceeds all requirements and that the GM Supplier Quality Engineer (SQE) and Supplier Quality Global Process Leader is informed and is in written agreement to any modifications of the requirements. Where there’s a conflict or overlap of requirements between CG4317 GM 1927 03a or CG4338 GM 1927 03 SQ SOR, CG4317 GM 1927 03a supersedes those stated in CG4338 GM 1927 03 SQ SOR.

PFMEA Requirements

The following are considerations/requirements when establishing the acceptable PFMEA detection rankings and process controls.

1. For all Severity Level 8, 9, & 10 items ensure that that the PFMEA severity ranking matches the design DFMEA severity ranking. The attached DFMEA to PFMEA Connectivity Scorecard Template or GM 1927 21 DFMEA PFMEA Gap Analysis Process and Transition Form or equivalent documentation is required as evidence of this activity.
2. In all cases, detection ratings for severity level 9 &10 features must be properly assessed and driven to the lowest possible value based on industry accepted best practices for process control. The default approval for PFMEA detection ratings and associated process controls will be the Production Part Approval Process (PPAP). Refer and comply to AIAG FMEA VDA Handbook or AIAG PFMEA Handbook or AIAG PFMEA 4th Addition and CG4338 GM 1927 03 SQ SOR.
3. Critical features requiring additional care will be identified as a KCDS special characteristic in math data, engineering drawings, or SORs (KPC, PQC, AQC, DR, etc.) and shall meet process capability & control plan requirements specified in CG4338 GM 1927 03 SQ SOR.
4. If detection of a failure mode is only possible by a destructive test, lot acceptance testing, and traceability are required.
5. Provide documentation of direct linkage from KCDS special characteristics on the PFMEA to online control / operator work instructions.
6. When incorporating new process or technology at sub-tiers the tier 1 supplier shall perform a DFMEA and PFMEA review with their sub-tier(s).
7. All types of fasteners shall be verified for presence within the assembly process and have a detection level of 5 or lower.

Acknowledgement

Please sign, date, & return this document as a record of your understanding of these requirements.

Authorized Supplier Management:

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| **Change History** | | | | |
| **Date** | **Version** | **Change Summary** | **Approver** | **Approving Department** |
| 1/11/16 | 1.0 | PFMEA SOR for ALL Powertrain components. | GPM –  Tom Pougnet | Supplier Quality and Development |
| 5/16/16 | 2.0 | Updated for “supplier SHALL complete…. PFMEA Gap Analysis….” Added phase pictures and embedded PFMEA GA File. M. Plotkowski | GPL – Brian Davis | Supplier Quality and Development |
| 8/24/18 | 3.0 | Updated to Establish Connectivity linkage for 8,9, &10 Items, provided linkage to KCDS for capability requirements and PPAP for detection approval, added New GPS DFMEA/PFMEA Connectivity Worksheet | GPM-Brian Davis | Supplier Quality and Development |
| 8/30/18 | 3.1 | Minor typo correction | GPM – Brian Davis | Supplier Quality and Development |
| 4/23/2019 | 3.2 | Rename to remove date and GM Conf | Brian Davis | GPS GPL |
| 8/6/2019 | 3.3 | Updated wording regarding requirement conflicts with CG4338 | James Bokros | Supplier  Quality |
| 4/2/2022 | 4.0 | Updated with new GM Logo, changed name of CG document, added new reference for AIAG FMEA VDA requirements, added new CG references for AIAG VDA, removed FMEA Rankings tab on attached worksheet | Craig Kirbitz | GPS Global Process |
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