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STANDARDS & GUIDANCE REPORT · UNITED STATES · INDUSTRY REFERENCE MANUAL

AIAG APQP

Advanced Product Quality Planning and Control Plan reference manuals

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ISSUED BY	Automotive Industry Action Group (AIAG)	PREPARED BY	Conner Davidson
EDITION	APQP, 3rd edition (2024), and the Control Plan manual, 1st edition (2024), issued as companion volumes	STATUS CHECKED	October 24, 2026
INDUSTRIES	Automotive	ONLINE	qesisbest.com/standard-aiag-apqp.html

CURRENT EDITION Current editions. The 2024 revision moved the Control Plan into its own reference manual; customers set when their suppliers must use the new editions.

What It Covers

A structured method for planning a new or changed product and its manufacturing process so that it meets the customer's requirements on time, with the control plan that carries those decisions onto the shop floor.

Who It Applies To

Automotive suppliers at every tier, and any manufacturer whose customer invokes APQP in its supplier requirements.

Key Requirements

- Phase gates from planning through design, process development and validation to launch and feedback, each with defined outputs.
- A cross-functional team that owns the plan, with the customer's voice captured as design and process inputs.
- Special characteristics identified early and carried through the FMEAs, the control plan, and the work instructions.
- Prototype, pre-launch and production control plans, linked to the process flow and the PFMEA.
- Product and process validation, ending in production part approval before volume shipment.

Structure at a Glance

PART	TOPIC	WHAT IT ASKS FOR
Phase 1	Plan and define the program	Voice of the customer, design goals, reliability and quality goals, preliminary bill of materials, and process flow.
Phase 2	Product design and development	DFMEA, design verification, drawings and specifications, special characteristics, prototype control plan.
Phase 3	Process design and development	Process flow, floor plan, PFMEA, pre-launch control plan, work instructions, MSA plan.
Phase 4	Product and process validation	Significant production run, measurement systems evaluation, preliminary capability, production validation, PPAP.

PART	TOPIC	WHAT IT ASKS FOR
Phase 5	Feedback, assessment, and corrective action	Reduced variation, customer satisfaction, delivery and service, lessons learned.
Control Plan	Companion manual (2024)	Prototype, pre-launch, and production control plans and their linkage to the process flow and PFMEA.

What an Auditor Asks to See

- The APQP timing plan and the status of each deliverable.
- How special characteristics flow from the drawing to the control plan.
- The process flow, PFMEA and control plan for one part, read side by side.
- Lessons learned from the last launch, and where they were used.

Requirements Checklist

Work down the list with the evidence in hand; write where each item is evidenced in the right-hand column.

#	REQUIREMENT	EVIDENCE ON FILE
1	Cross-functional team named, with customer contacts and responsibilities.	
2	Timing plan agreed with the customer and tracked to each deliverable.	
3	Customer requirements, including customer-specific requirements, captured as inputs.	
4	Special characteristics identified and symbolized consistently across documents.	
5	DFMEA and PFMEA completed to the AIAG-VDA method, with actions closed.	
6	Process flow, PFMEA, and control plan aligned step by step.	
7	Measurement systems analysis planned and completed for control plan gauges.	
8	Preliminary process capability studied on special characteristics.	
9	Significant production run performed at rate, with the production tooling and people.	
10	PPAP submitted at the level the customer requires, and approved before shipment.	
11	Lessons learned recorded and fed into the next program.	

Implementation Roadmap

1. Program set-up	Name the team, gather the customer's requirements, and agree the timing plan.
2. Design	Run the DFMEA, fix the special characteristics, and release the drawings.
3. Process	Build the process flow, PFMEA, and pre-launch control plan as one linked set.
4. Validation	Prove the gauges, run at rate, study capability, and submit the PPAP.
5. Launch and learn	Contain early-production problems, then record what the next launch should do differently.

How It Fits With Other Requirements

APQP is the umbrella; PPAP is its validation output, the AIAG-VDA FMEA handbook supplies the risk analysis, and MSA and SPC prove that the measurements and the process can be trusted. Aerospace applies the same discipline through AS9145.

Findings We See Most Often

- Control plan not updated after a process change.
- PFMEA not reviewed when a customer complaint revealed a new failure mode.
- Capability studies run on gauges that had not passed MSA.
- Customer-specific requirements not identified for the program.

Where Systems Fall Short

- Control plans that do not match the PFMEA or the floor.
- Gate reviews held after the gate has already been passed.
- Special characteristics marked on the drawing but missing from the work instruction.

How QES helps. Launch readiness reviews that trace each special characteristic from the customer's drawing to the operator's instruction. See the gap assessment: qesisbest.com/services.html#gap-assessment · +1 (401) 246-3204 · mweeden@qesisbest.com

Sources, checked October 24, 2026. AIAG — Automotive Industry Action Group publications — www.aiag.org.

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