

APQP & CONTROL PLAN 2024
SPC AIAG-VDA 2026

AIAG VDA

MINITAB REQUIRED

SPC consulting group

INCLUDES NEW SPC AIAG-VDA

CORE TOOLS

APQP+PFMEA+SPC+MSA+CP+PPAP

Objective:

The participant will understand the fundamental concepts of the automotive Core Tools, apply them through practical examples in accordance with AIAG manuals, and understand the importance of quality planning in ensuring product quality and regulatory compliance.

Prerequisites:

- Basic knowledge of IATF 16949:2016 (desirable)
- Work experience in manufacturing environments
- Basic knowledge of statistics
- Laptop with Minitab software (recommended)

Duration:

24 hours

Day 1: APQP – Advanced Product Quality Planning 3rd Edition, 2024

- Introduction to APQP
- Changes in the 2024 version
- Program management
  - + Risk assessment and mitigation
  - + Gate management
  - + KPIs related to APQP
- Sourcing
  - + Increasing focus on sourcing
  - + Checklist
  - + Gate management for sub-suppliers
- Clarification / detail
  - + Change management during APQP
  - + Capacity planning
  - + Traceability
  - + Error proofing and mistake proofing
- Relation to IATF 16949:2016
- Product quality planning cycle
  - + Gates 0-5

FMEA – Failure Mode and Effects Analysis 1st Edition, 2019

- Introduction to FMEA (AIAG-VDA)
- 7-step approach
- Planning and preparation
- Structure analysis
- Functional analysis
- Failure analysis
- Risk analysis
- Prevention, detection and containment
- Action Priority (AP)
- Practical example of PFMEA

Day 2: SPC AIAG-VDA – Statistical Process Control, 1st Edition, 2026

- Introduction to SPC
- Relationship with IATF 16949:2016
- Measures of central tendency and dispersion
- Elements of a control chart
- Common and special causes
- Variable data control charts
  - + X-R Chart
  - + I-MR Chart
- Attribute control charts
  - + p Chart
  - + u Chart
- Activity
- Capability study (Cp, Cpk, Pp, Ppk)
- Sixpack – Capability analysis in Minitab
- Activity

Day 2: MSA – Measurement Systems Analysis 4th Edition, 2010

- Introduction to measurement systems
- Relation to IATF 16949:2016
- Elements of a measurement system
- Repeatability and reproducibility
- Gage R&R study – design and execution
- Gage R&R study in Minitab
- Interpretation of Gage R&R results
- Attribute measurement systems
- Activity

Day 3: Control Plan 1st Edition, 2024

- Changes in the 2024 version
- Feature management
  - + Special characteristics
  - + Transfer characteristics
- Addressing common weaknesses
  - + Error-proofing
  - + Volume-based sampling
  - + Reaction plan responsible
- Clarified expectations
  - + Directed suppliers
  - + Safe launch
- Relation to IATF 16949:2016
- Activity

Day 3: PPAP – Production Part Approval Process 4th Edition, 2006

- Introduction to PPAP
- Relation to IATF 16949:2016
- PPAP submission
- Significant production run
- 18 PPAP requirements
- PPAP levels
- PSW – Part Submission Warrant
- Activity