NISSAN
MOTOR CORPORATION

6.1 Design Verification and Product/Process Validation

Activity Purpose:

- The supplier shall carry out:
  Simulations or tests to ensure that the product design meets Nissan design requirements (Design Verification). These tests shall be carried out using off-tool parts.
- Tests to confirm that the design verification results have not been compromised by the production process. These tests shall be carried out using off-process parts. Product/ Process validation must demonstrate that production parts with production variation will meet all specified function and performance requirements.
- A series of production trials in order to provide measured sample parts for use in Nissan assembly activities. These assembly activities will provide confirmation that parts produced at each stage (prototype, off-tool, off-process etc.) meet the Nissan shape/ fit/ function/ assembly requirements when assembled with mating parts.

Note(s):

- When requested, the supplier shall attend the Nissan trial assembly activities to review the assembled part condition and confirm Nissan assembly requirements.

Phase	1	2	3	4	5
Activity Content		● Create a design verification and product / process validation plan	● Manufacture parts in the off-tool condition and perform detailed measurement studies to confirm that the parts meet design specification for dimensions, material, appearance, etc.	● Manufacture parts in the off-process condition and perform detailed measurement studies to confirm that the parts meet design specification for dimensions, material, appearance, etc.	● Carry out Continuous conformance testing for functional and performance requirements. ● Carry out design verification and product / process validation activities for design changes.
		● When requested, manufacture prototype parts and perform detailed measurement studies to confirm that the parts meet design specification for dimensions, material, appearance, etc.			

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		● Implement the planned design verification activities. Confirmation activities shall include: ➢ Calculations. ➢ Digital simulation / test. ➢ Confirmation of CAD data quality. ➢ Review of implementation of countermeasures from lessons learned and recurrence prevention activities.		● Implement the planned product / process validation activities. Confirmation activities shall include: ➢ Test activities to validate that manufacturing process variation has not affected the ability of the parts to meet design requirements for function and performance.	
		● When requested, provide measured sample parts in the prototype condition for use in Nissan trial assembly activities.	● Provide measured sample parts in the off-tool condition for use in Nissan trial assembly activities.	● Provide measured sample parts in the off-process condition for use in Nissan trial assembly activities.	
Output Document		● Supplier Digital Test Report			
		● Supplier Test Plan and Report ● Inspection Report			
			● Appearance Approval Report		

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