

First Article Inspection Checklist

Use this checklist to plan first article inspection for SMC axial flux cores, AFPM stators, segmented teeth, tooling samples, or related motor-core components.

This file is a planning template. It is not a released inspection report.

1. Program Identification

- Buyer:
- Project:
- Part name:
- Part number:
- Drawing revision:
- Sample ID:
- Supplier lot ID:
- Inspection date:
- Inspector:

2. Drawing and Datum Control

- Latest 2D drawing received:
- STEP or DXF file received:
- Datum scheme confirmed:
- Ballooned drawing required:
- CTQ dimensions identified:
- Tolerance stack reviewed:
- Drawing notes and finish requirements reviewed:

3. Measurement Plan

Characteristic	Drawing Requirement	Method	Sample Result	Status
OD				pass / review
ID				pass / review
Axial height				pass / review
Tooth or segment pitch				pass / review
Air-gap face flatness				pass / review
Mounting datum				pass / review
Critical slot or tooth detail				pass / review

4. Material and Process Checks

- Material lot recorded:
- Density or weight checked:
- Thermal process route recorded:
- Machining allowance confirmed:
- Coating or insulation status checked:
- Visual defects reviewed:
- Handling damage reviewed:

5. Buyer Review

- Deviations listed:
- Engineering concessions needed:
- Corrective action needed:
- Accepted for magnetic validation:
- Accepted for assembly trial:
- Accepted for pilot quote:
- Re-sample required:

6. Release Boundary

All accepted results should reference drawing revision, sample ID, measurement method, and reviewer decision. Do not reuse a first article result for a different drawing revision or process route without review.

Example Acceptance Language

Each CTQ result should identify drawing revision, sample ID, inspection method, measured value, tolerance, and release status before pilot build approval.

Buyer-preparation template. Final acceptance records require confirmed drawing revision, sample or batch ID, test condition, material route, and supplier release file.