

Husqvarna Special Characteristics Requirements

Instruction

Husqvarna Group

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0 Preamble

This document was previously named “*Special Characteristics – Manufacturing Requirements*” and may still be referenced so on drawings.

The special characteristics process originates from R&D’s “*IFI requirements*” which developed to “*Special characteristics - manufacturing requirements*”. This version, “*Husqvarna Special Characteristics Requirements*”, has changed name for supplier orientation and the ownership transferred to the SQA department.

The changes in this edition are clarifications and elaborations of the original requirements.

1 PURPOSE & SCOPE

R&D use special characteristic symbols to visually mark characteristics that have a certain impact to the final product. These symbols are connected to further requirements for PPAP and serial production that are explained in this document.

For Husqvarna internal use: “Special Characteristics – R&D Appliance” is the connected document for how to apply special characteristics symbols in specifications.

2 Abbreviations

The term Special Characteristics is the general term and not shortened as SC.

IC	Inspection Characteristic
SC	Significant Characteristic
CC	Critical Characteristic
MSA	Measurement System Analysis
SPC	Statistical Process Control

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3 Requirements

Each special characteristic symbol is connected to mandatory requirements for PPAP and serial production. In case of low annual production, destructive testing or similar, the responsible SQE can adapt the requirements to the situation at hand. The requirements are as follows:

	Requirements	Inspection Char.	Significant Char.	Critical Char.
Symbol	Symbol used in 2D drawings:			
	Symbol used in 3D drawings:	[IC]	[SC]	[CC]
PPAP	MSA:	No	Gage R&R	Gage R&R
	Capability analysis:	No	Yes ¹⁾	Yes ¹⁾
Serial Production	Inspection frequency:	1 st and last piece + regular inspection	1 st and last piece + regular inspection	100%
	Min inspection sample size:	Per process ²⁾	Per process ²⁾	100%
	Documentation of results:	No	Yes	Yes
	Inspection result traceability:	No	Batch / date ³⁾	Batch / date ³⁾
	Inspection documentation retention:	No	Yes	Yes
	SPC:	No	No	Yes

¹⁾ Refer to "Husqvarna PPAP Requirements" ($C_{pk} > 1,33$ or $C_p > 2,0$).

²⁾ If multiple tools, cavities, lines etc. affect the special characteristic, the inspection sampling must be done from all process origins.

³⁾ 100% marking of conforming parts can replace documentation, traceability and retention.

3.1 Inspection Frequency, Sample Size and Measurement

Inspection frequency and sample group size have to be clearly defined in control plans and inspection instructions. If the characteristic is manufactured in multiple origins, all origins have to be sampled and measured.

The measurement equipment have to be easy accessible to verify running production.

3.2 Documentation, Traceability and Retention

The supplier must establish an easy accessible and organized way to document, trace and retain the inspection results in a safe way.

- The documented results must be stored by batch level and/or date.
- There is no general retention time, but 10 years should be the minimum. In case of storage space issues, the supplier need to inform Husqvarna to find another solution of retention time.
- In case of end of life cycle of the part, the supplier has to contact Husqvarna SQE before discarding the data.
- If a supplier by any reason cease to supply the part to Husqvarna, the documentation must be provided to Husqvarna for further retention.

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4 Historical information and cross references

This routine for special characteristics replaces the Swedish processes:

- R0340 Documentation requirement
- R0341 Classification requirement

The former routines are still valid for connected documents when there is a reference to it. Below follows a cross reference table between former and new symbols.

Former Process	Former Symbol	New Symbol
R0340 Documentation Requirement		 (CC)
R0341 Classification Requirement	[1]	 (CC)
R0341 Classification Requirement	[2]	 (SC)
IFI		 (SC)

5 Version History

The version is managed automatically by How We Work. There is no need for manual modification.

Version number	Tracking of changes in the document	Date
Version history - SharePoint	Review / Compare function of Microsoft Office	Version history - SharePoint
1	Migration from QMS, version 4 Doc. No MERN-96MARX	Dec. 2016
2	Updated template	See date in footer
3	Updated template, changed owner and corrected symbol under point 4.	See date in footer
4	Added symbols used on 3D models (FTA)	See date in footer
5	Document is reviewed and clarified.	20220620