

Function

Quality Brose Group / Purchasing Brose Group

Document type

Hand Book

Document name

Supplier management at Brose:

Escalation procedure

(incl. CSL Program, TOP-Q discussion)

Supplier evaluation

Status	Released
Version	01.11.2019

Summary

Change history	
101	19.05.04: 1.1 and 1.2 updated, revised PPM-point deduction und logistic changed
102	13.08.04: 1.2 updated; 1.3 and 1.2.2 logistic catalogue revised, 1.2.3 Purchasing criteria detailed description
103	8.9.04 1.1 and 4 updated. 1.2.3 corrected > 9% war < 9%
104	01.04.05: 1.2.1 and 1.2.3. changed
105	24.04.06: Sequence of chapters changed Editorial revision Escalations procedure complete revision
106	Supplier evaluation revised (addition Qualification und Performance; criteria Project management, Status Audit + Certification and Status Escalation procedure added
107	07.08.09: Escalation procedure revised Supplier evaluation revised
108	26.10.09 Escalation procedure updated (action out of audits added)
109	20.08.10: CSL process added, Top-Q discussion added
110	17.02.12: Escalation procedure updated, Supplier evaluation Requalification added
111	17.01.13: Disruption updated, Requalification revised, packaging and documentation updated, project management updated and failure codes added, point 5.2.7 Project management Bonus system added, arrangement updated; Technical Requalification into Qualification / Status Audit + Certification implemented
112	01.03.2017: Entire hand book revised, Supplier evaluation revised and failure codes added, Top Worst Supplier added, wording changed
113	01.06.2017 Codes added and updated
114	01.09.2017 Codes updated
115	01.12.2018 Codes added

116	01.11.2019 Supplier evaluation letter updated
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Source	Quality Brose Group / Supplier Quality
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Supplier management at Brose

1 INTRODUCTION

To achieve our customer's expectations and their company goals the Brose Group needs a worldwide supplier base which constantly holds its performance and qualification level at top level.

It's being measured by the continuous (monthly) **Brose Supplier Evaluation**.

In case the supplier does not reach the set goals/targets, actions within the **Brose Escalation procedure** will be applied.

In the chapters below you will find a short description of the Brose Supplier evaluation as well as the Escalation procedure.

2 SUPPLIER EVALUATION

As important partners of our organization our suppliers have an essential share on the success of Brose products. Therefore an absolute support of our suppliers is necessary.

The Supplier evaluation is the instrument for showcasing supplier's fulfillment of set goals/targets. The evaluation consists of main criteria Performance and Qualification which include below shown criteria. The evaluation is based on notifications out of Brose plants, business divisions and central functions.

2.1 Overview

Performance

- Product quality
- Logistics performance

The performance is evaluated on group level on basis of fixed indicators (quality- and logistic notifications) that are determined out of the deliveries to the plants.

Qualification

- Purchasing evaluation
- Project management/-performance
- Status of certification and/or Brose-Audits
- Escalation level in Brose Escalation procedure

The qualification is evaluated on group level.

Ratings are given according this table:

Points	Rating
100 - 90	A
89 - 80	AB
79 - 60	B
59 - 0	C

For each main criterion 100 points are being given, if there are no disruptions (incidents)/notifications. Possible point deductions are described in the failure catalog overview below.

For the overall evaluation all relevant notifications out of the evaluation time period are being taken into account.

The overall evaluation goes into following score/rating and following activities are being required:

A (rated)-Suppliers

Supplier meets our requirements. This result is essential for a long-standing working relationship.

AB- Suppliers

The result that the supplier has reached/scored still meets Brose's requirements. Brose expects the suppliers to improve (independently) on any shortcomings and develop themselves into an A-supplier through continual improvement.

B- Suppliers

The result that the supplier has reached/scored does no longer meet Brose requirements. In addition to the expected 8D reports on each individual case, the suppliers create a special action plan (to improve to an A rating) and make it available on request. B-suppliers send the special action plan to all coordinators of the complaints.

C- Suppliers

The result that the supplier has reached/scored is for Brose not acceptable. If the suppliers have not yet been asked to provide a special action plan to recover an A rating – (in addition to the expected 8D reports on each individual case), this suppliers send the special action plan to all coordinators of the complaints.

As part of our C supplier management, we decide on further cooperation with your company.

The following consequences may arise for your company:

- Measures for joint supplier development
- Temporary suspension of new orders (Business on Hold) pending a stable quality/logistics improvement
- Termination of business relations

Brose expect a fast and effective implementation of measures in coordination with our company, since this C rating endangers the continuation of our business relationship.

Performance of supply to individual plants

The evaluation of the quality performance of the deliveries to each individual Brose plant occurs on basis of the fixed indicators (incidents and ppm). As additional performance indicator ppm are considered.

Requalification

Requalification is a main part to secure product quality with the aim of further reduction on supplier related incidents. And has therefore particularly influence on the further reduction of internal and external failure costs. Requalification is part of the IATF 16949.

The "Technical Requalification" is a random check at the supplier location of the requalification characteristics that were defined in the feasibility study. The registration to perform a "Technical Requalification" at the supplier location is done at the latest 5 working days prior to the planned appointment.

Self-assessment CQI-xx and D-parts (Brose requirement)

For all relevant processes that are defined in the feasibility study all relevant self-assessments (CQI-xx and D-parts) have to be send unasked to central quality Brose Group (quality@brose.com) in Coburg every 12 months. If the documents are not send in due time there will be a negative influence (deduction of 11 points in the supplier evaluation) on the supplier evaluation. Independent of customer requirements both CQI-xx (AIAG-CQI-standards) and D-part self-assessment are a requirement of the whole supply chain.

2.2 Failure catalogs

2.2.1 Quality

The criteria Quality consists of points for incidents/disruptions (100 points).

Incidents / disruptions

	Weighting	Deduction/ Notification
No fault or no guilt on supplier side, self-notification	0	0
The problem is being handled within normal daily business	1	4
The problem is being handled within Brose Top- Q Process included into Top- Q escalation level 1	2	11
The problem is being handled within Brose Top- Q Process included into Top- Q escalation level 2	3	21
The problem is being handled within Brose Top- Q Process included into Top- Q escalation level 3	4	41

PPM- values are being determined out of the delivered amount and the „failure amount – ppm“ in the SAP notification. PPM-values do not affect the supplier evaluation. PPM-values together with incidents/disruptions are being used to determine necessary corrective actions.

For standardized recording of the ppm-relevant amounts there is a list of „rules“ for admittance of defective parts into the ppm evaluation of suppliers defined. (see appendix 1).

The Quality of the documents submitted by the supplier to Brose and the accessibility and the working together with Brose can influence the supplier evaluation negatively. Especially the quality of the 8D reports submitted to Brose will be assessed and evaluated.

General Quality failure	Factor	Deduction
Poor availability of Supplier	1	4
Translation effort	2	11
Intensive work to obtain information	3	21
Non reliable information	4	41

General Quality failure	Factor	Deduction
Poor problem solving competency / Insufficient 8-D report	1	4
	2	11
	3	
	4	

Relativisation-coefficient

Due to partly deliveries by logistic service providers in kanban-lots there was introduced a relativisation-coefficient for balance.

2.2.2 Technical Requalification

The requalification (at Brose Technical Requalification) of products is a requirement of the IATF 16949, chapter 8.6.2. The extent of the technical requalification is defined (variety and amount) previously in the feasibility study. Requalification is a main part to secure product quality with the aim of further reduction on supplier related incidents. And has therefore particularly influence on the further reduction of internal and external failure costs. The "Technical Requalification" is a random check at the supplier location of the requalification characteristics that were defined in the feasibility study. The registration to perform a "Technical Requalification" at the supplier location is done at the latest 5 working days prior to the planned appointment

Service	
Event-description	Deduction
Deviation for part number available	5
Requalification for part number not done	10

If there is detected (during Requalification check) that the supplier does not have implemented a system for requalification, there is a point deduction according. to the following table.

Requalification	Deduction	Leading to "qualification"
No requalification system available	41	"C"

2.2.3 Logistics

Delivery reliability	
Event-description	Deduction
Mispick at ESP (external service provider)	2
Transport fault (deduction supplier)	4
Critical arrear without del.-information	3
Delay/under minimum stock with replenishment of assembly without special transport (ST) to customer	10
Delay/under minimum stock with replenishment of assembly with special transport (ST) to customer	14
Delay/under minimum stock with line-stop at Brose without special transport (ST) to customer	16
Delay/under minimum stock with line-stop at Brose with special transport (ST) to customer	20
Delay/under minimum stock with line-stop at customer	70
Anticipated/ exceeded delivery with return-shipment or not acceptable stock increase	4
Delivery outside defined time-slot	4
Pick-up outside defined time-slot	4
Late advise of transport requirement	4
Incorrect advise of transport requirement	4
One incident is related to one material (ID-No.) and one call off or minimum stock	

Service		Deduction
Fault		
Partner at supplier almost not available	2	
Translation efforts (time/money)	2	
Intensive work to get information	4	
Non-reliable information	4	
Poor/wrong container account-management	4	
Insufficient flexibility regarding requirements or change requests from Brose	4	
Insufficient tie down (operational safety, road safety)	4	
One incident is related to one process (e.g. e- mail about several ID- No. which is not answered completely or partly)		

Packaging and documentation	
Fault	Deduction
Wrong (according instruction), dirty or damaged packaging	2
Missing or wrong labels, mixed materials	4
Missing/wrong delivery-documents (delivery note, invoice)	4
Missing label of dangerous materials	2
Missing/ wrong content	6
Use of environmentally compatible packaging is not guaranteed	4
Customer-item number is missing on the debit note	4
Change index on delivery note is missing/ wrong	4
Missing/ wrong Avis	4
Missing/incorrect ASN	4
One incident is related to one delivery (delivery note/Invoice)	

2.2.4 Labeling of parts

Part code	Factor	Abzug
Fault		
Part code general		
Part code is incorrect	1	4
Part number is incorrect / not up-to-date		
Part number is missing / illegible		
Manufacturing date is incorrect / not up-to-date		
Manufacturing date is missing / illegible		
Part serial number	2	11
Part label on the wrong position		
Part label bad readable		
Part label is missing		
Charge number wrong	3	21
Marking is missing		
Marking paint on the label		
Wrong label		
Barcode / Data matrix not readable		
Part serial number missing / not readable	4	41
Part serial number double		
In the data bank not available		
One incident is related to one delivery or ID-No		

2.2.5 Purchasing

Fault	Description	Factor	Deduction
Competitiveness/ Costs	< 3% less competitive		0
	< 5% less competitive	1	10
	≥ 5% less competitive	2	20
Commercial responsiveness	On time		0
	Delayed response/ after request only	1	10
	Not according to requirements	2	20
Cost transparency	Complete cost-break-down (A- and B- price)		0
	cost-break-down not complete	1	15
	Total price	2	20
Contract acceptance	Necessary contractual requirements are met		0
	Necessary contractual requirements are met partly or are not met	1-2	10-20
	No negotiation willingness or no conclusion	3	30

2.2.6 Project Management

Fault	Description	Abzug
Attitude at quotation	<ul style="list-style-type: none"> - quotations complete - prices are plausible - competitiveness - use of Brose forms/ Brofis 	5
Technical dialog	<ul style="list-style-type: none"> - APQPs / Feasibility studies - Quality of APQP - Technical support / engineering support 	5
Commercial dialog	<ul style="list-style-type: none"> - Willingness for negotiation - Propose and realise cost reduction potentials self- contained 	5
Adherence to dates	<ul style="list-style-type: none"> - quotations - Prototypes / samples / Initial samples - Project documents (AQP / Control plans / Dimensional measurement reports / etc.) 	5
Quality of parts	<ul style="list-style-type: none"> - Prototypes / Samples / Initial samples - Number of AWEs and drawing changes (during launch) 	10
Quality of documents	<ul style="list-style-type: none"> - quotation - APQP - dimensional reports - tool data sheet 	10
General performance of supplier	<ul style="list-style-type: none"> - Project management system is existing - Preparation of meetings - Availability - active communication - Presence / Customer care - Flexibility / Reaction time - Adherence to consents and agreements 	5
Deviation (AWE) caused by supplier	<ul style="list-style-type: none"> - Deviation is caused by the supplier 	10
Drawing update caused by supplier	<ul style="list-style-type: none"> - Drawing update caused by supplier 	10
Noncompliance to APQP	<ul style="list-style-type: none"> - APQP commitments are not kept by supplier 	10
Full-Run-Test - result: yellow	<ul style="list-style-type: none"> - Result of Full Run Test: yellow 	10
Full-Run-Test - result: red	<ul style="list-style-type: none"> - Result of Full Run Test: red 	21

2.2.7 Project Management Bonus system

Bonus	Description / Condition	Factor	Bonus
Innovation performance supplier	- 1 – 3 submitted Innovation-Input - first evaluation is done - Input entered in Hype	1	5
	- 1 Innovation-Input passed 1st Innogate (Idea release)	2	10
	- 1 Innovation-Input passed 4th Innogate (pre development release)	3	15

2.2.8 Status Audit + Certification

Process audit

If Brose carry out a process audit, the result will influence the qualification directly according to this table:

Audit result	Deduction	Leading to "qualification"
"green", "yellow"	0	„A“
"yellow" and insufficient progress in processing corrective actions	21	„B“
"red"	21	„B“
"red" and insufficient progress in processing corrective action	41	„C“

Status of certification

Suppliers status of certification will directly influence the „Qualification“ according to this table:

Status of certification	Deduction	Leading to "qualification"
Certificate expired and no reaction to the requisition of the certificates	41	„C“

Continuous Self-assessment

For all relevant processes that are defined in the feasibility study all relevant self-assessments (CQI-xx and D-parts) have to be send unasked to central quality Brose Group (quality@brose.com) in Coburg every 12 months. If the documents are not send in due time, there will be a negative influence (deduction of 11 points in the supplier evaluation) on the supplier evaluation. Independent of customer requirements both CQI-xx (AIAG-CQI-standards) and D-part self-assessment are a requirement of the whole supply chain.

Status of certification	Deduction	Leading to "qualification"
Self-assessment not valid	11	„AB“

2.2.9 Influence of Escalation level

In the case, a supplier gets on one of the Escalation levels of the Brose Escalation system caused by on-going problems there will be an influence on the Supplier evaluation according to this table:

Escalation level	Deduction	Leading to "qualification"
„0“	0	„A“
„1“	11	„AB“
„2“	21	„B“
„3 BSHD“	21	„B“
„3 Relocation of the supplier“	41	„C“

2.2.10 Impact of escalation level

In the case, a supplier gets on one of the CSL-levels of the Brose Escalation system caused by repeated failure, escalated product topics or escalated supplier development programs there will be an influence on the Supplier evaluation according to this table:

CSL levels	Deduction	Leading to "qualification"
„0“	0	„A“
„1“	11	„AB“
„2“	21	„B“
„3“	21	„B“

2.3 Transmission to suppliers

The monthly evaluation to the suppliers is transmitted automatically via email.

3 BROSE ESCALATION PROCEDURE

In order to guarantee a no viscous production and project process and to recognize problems early, Brose applies the following escalation procedure. This process enables it, in case of interferences, which are caused by the supplier, to define uniform appropriate counter-measure and to ensure their eradication.

Brose differs two phases here:

- Project phase (Development and implementation phase)
- Series phase

In every step of the escalation procedure appropriate actions are defined, which have to be fulfilled within a stipulated period. By default of the stipulated actions the escalation is continued in the next higher step, up to the partial dislocation or the completely reduction of the supplier.

Within the scope of the escalation procedure, necessary benefits by Brose or its commissioner are invoiced to the supplier.

In case of stoppage, the supplier gets the status **“New Business on hold”**.

„New Business on hold“ means for the supplier, that he gets for the period of the stoppage

- **no inquiries as well as**
- **no new orders** of Brose.

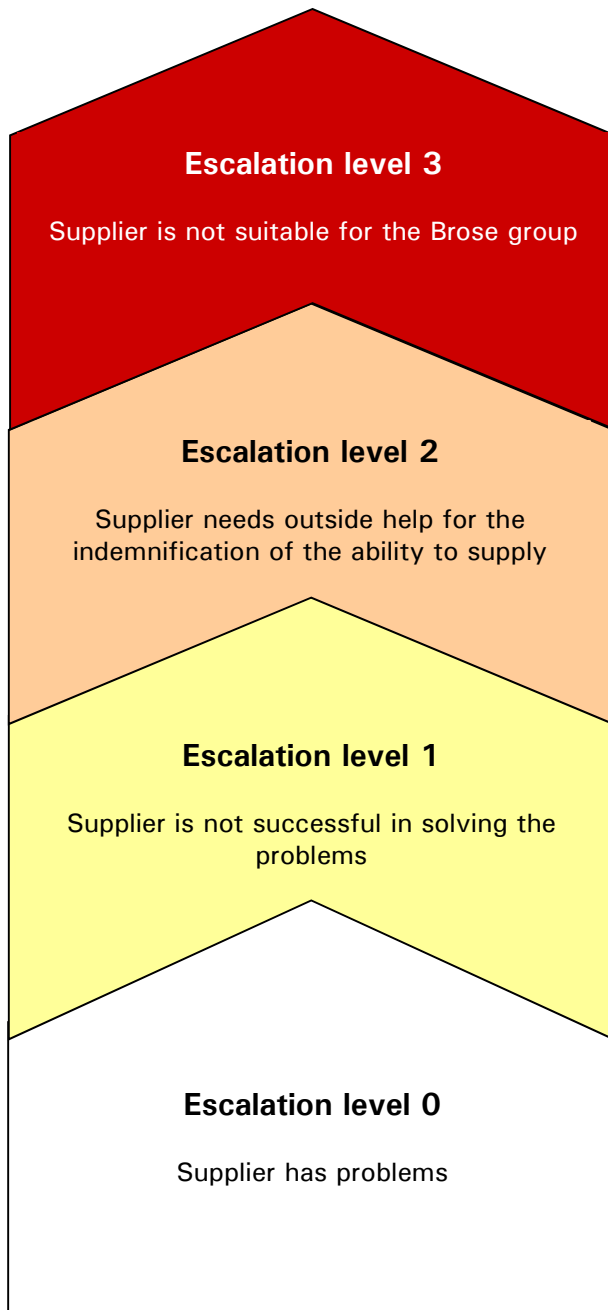
Other laws, which are entitled to Brose after the contractual agreements or the agreed law, apply to this escalation procedure additional and stay untapped.

Top Worst Supplier Plants

The Top 5 Worst Suppliers at plant level are based on the data from QORS evaluation. The selection of suppliers is based on delivered product quality and logistic performance, since these two indicators show a direct impact of a supplier towards a Brose plant.

The quality manager in the respective plant can decide whether or which supplier he wants to invite for an escalation meeting.

Schematic representation of the escalation procedure in the project and series phase



Possible Tools / Processes:

- Resourcing
- New Business On Hold
- Top Q discussion
- Supplier development program
- CSL 2 / CSL 3
- Extended actions plan
- Escalation discussion with supplier
- CSL 1
- Actions plan

4 CSL („controlled shipping level“) PROGRAM

Within the scope of the escalation procedure the Brose group leaves the possibility open to convene a CSL program by revision mistakes, escalated product themes or escalated supplier development themes. Following steps of the CSL program are possible:

CSL1:

The supplier investigates to 100% the postulated characteristics about a certain period/ for a postulated quantity or as long as the counter-measure are effective by the supplier. The eradication is carried out within the scope of the complaint eradication in the plant.

Here it is decided on the CSL1 status. Deduction of 11 points in the supplier evaluation for the duration of the CSL1 program (escalation level 1).

CSL2:

An independent third party investigates the postulated characteristics about a certain period/ for a postulated quantity or as long as the counter-measure are effective by the supplier. The effectiveness of the actions must be confirmed from Brose. Deduction of 21 points in the supplier evaluation for the duration of the CSL 2 program (Escalation level 2).

CSL3:

To the actions of CSL2 a supplier development program of an independent third party is executed additional. The ranges, in which the supplier development take place, are defined in the “Kick Off Meeting“. The effectiveness of the actions (of the supplier development program) must be confirmed from Brose. Deduction of 21 points in the supplier evaluation for the duration of the CSL 2 program (Escalation level 2).

5 TOP-Q DISCUSSION

On e.g. not successful CSL-programs, escalated single themes (in the series as well as in the project phase), permanent insufficient performance Top-Q discussion with the supplier take place. Here the executive vice-president of the supplier is invited, possibly short-term too, to a TOP-Q discussion. To this discussion Brose expects a meaningful action plan, that contains the short-term immediate measure as well as the premeditated actions for a sustainable storage.

6 SUPPLIER EVALUATION

Rules for recording defective parts in suppliers' ppm evaluations

1. Accumulated rejection parts/complaints:	PPM-Bewertung:
a) Parts accepted by supplier:	100%
b) Parts rejected by supplier:	0%
c) No feedback after 10 WD ^{x1} processing time ^{x2} :	100%
d) Supplier proves customer error within 30 WD ^{x1} processing time ^{x2} , that the failure is not in the responsibility of the supplier	Korrektur möglich
e) After 30 WD ^{x1} processing time ^{x2}	Korrektur nicht möglich
2. Incidents at Brose:	
2.1. Reported by supplier:	
a) Parts failed on assembly line prior supplier report:	100%
b) Defective parts which have to be assembled before the supplier can sort (caused by supply bottleneck):	100%
c) All other parts:	0%
2.2. Series production fault discovered by Brose ^{x3} :	
a) Parts failed on assembly line prior to series production fault discovered ^{x3} :	100%
b) Defective parts which have to be assembled before the supplier can sort (caused by supply bottleneck):	100%
c) Defective parts at Brose's end:	100%
d) Stocks replaced (returned) for sorting by supplier:	0%
e) All other parts	0%
2.3. Wrong deliveries	
a) Wrong deliveries which will not affect the production process are merely evaluated as incidents in logistics terms:	0%
b) All other wrong deliveries are treated as defective parts:	siehe 2.1 oder 2.2
3. Incidents at the customer:	
If parts have already reached the Customer when a series production fault ^{x3} is discovered or the supplier reports one, the Customer and Brose together with the supplier must decide on the required action.	
a) Defective parts replaced or found by sorting:	100%

b) ppm-relevant quantities which customer charges to Brose are passed on to supplier:	100%
c) All other parts:	0%

Explanatory notes:

^{x1}) WD:

working days

^{x2}) Processing time:

Processing time runs from the date on which defective parts are physically accepted from the supplier. The date of acceptance is taken as:

a) The date on which goods are received at the supplier, if parts sent by Brose.

b) The date on which the supplier accepts parts at Brose.

^{x3}) Discovery of series production fault:

A series production fault applies **at the latest** under the conditions below:

a) 25 parts fail in succession, or

b) Maximum 1% failure rate is exceeded during a production shift.

Series production faults can also be established by goods inwards testing (QK), Central Quality (ZQU) or Electronics Quality (EQU).

7 TERMS AND APPREVIATIONS

8D-Procedure:	Problem solving method in 8 steps, which is being used as a standard method and reporting form
ppm	parts per million
FS:	Feasibility Study former QVP (Advanced Quality Planning)
FRT:	Full Run Test