

PPM-STAT

“Enhancing the quality of information in high-performance organizations.

Ensuring the availability and completeness of information in day-to-day operations. The optimal availability and completeness of information are key factors today towards ensuring the efficient and effective performance of tasks and assignments within an organization. Enhancing the quality of information can lead to improved and swifter performance of these tasks and assignments, and thus all in all to an overall improvement of the core processes as well”

ZWF May 2004

PPM-STAT

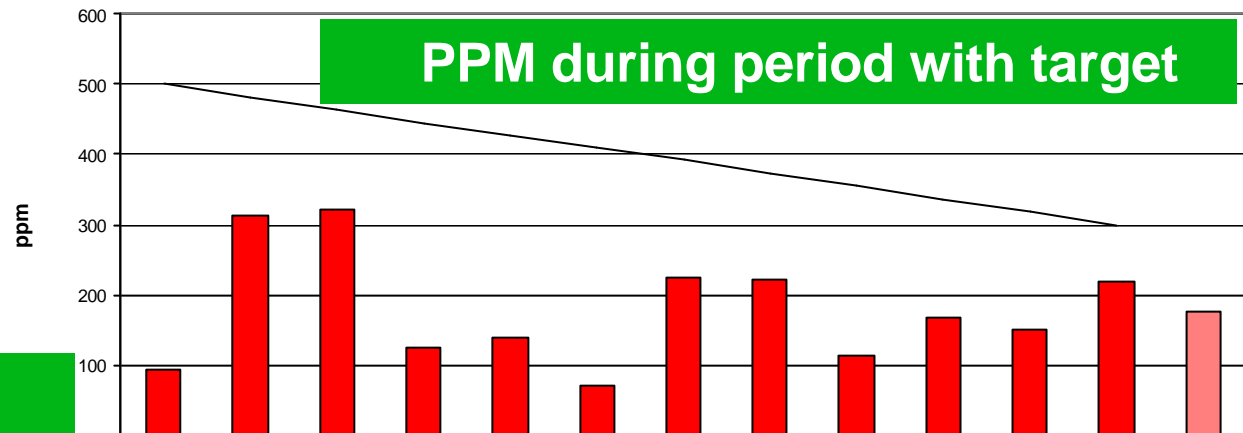
PPM-STAT is the optimal system for
Quality-Data:

- EOL-Rejects
- Total Line Rejects
- Line Returns
- Warranty

- Corrective Actions

PPM-STAT

90000 PTS EN
Internal Failure EOL per month 12 - 2003



corrective actions

Actions

Period	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Checked parts	454776	287487	318889	289045	275111	277196	259231	165608	253143	225056	204819	191191	3201552
Failure parts	42	90	103	36	38	20	58	37	29	38	31	42	564
Delivered parts	454734	287397	318786	289009	275073	277176	259173	165571	253114	225018	204788	191149	3200988
Failure PPM	92	313	323	125	138	72	224	223	115	169	151	220	176
Budget PPM	500	482	464	445	427	409	391	373	355	336	318	300	

Defects

00154	Tightness n.o.k.	11	9	9	8	10	4	30	13	21	13	7	18	153
00117	Upper TPO switch point n.o.k.	6	6	16	14	14	2	7	16	4	21	16	2	124
00126	Total loss	14	15	23	7	4	5	5		1	2	1		77
00118	Lower TPO switch point n.o.k.	3	42			2	1		1			3	14	66
00157	El.function n.o.k.	1	1	41	2	4	1	1	1	3	2			57
00128	Running mode "far" n.o.k.	5	11		1	1	4	6	1			4	6	39
00131	Threshold update n.o.k.	2	3		1	1	2	7	3					19
00124	Phase pos. "rising edge" n.o.k.		1	9				1	1					12
00125	Phase pos. "fall. edge" n.o.k.			4					1					5
00129	Upper TPO switch point >5,3			1	1	1	1	1						5
01361	Laser-Inscription n.o.k.												2	2
00218	Moulding fault		1		1									2
00179	Clamping part not locked													1
00130	Lower TPO switch point >5,3													1
00127	Running mode "near" n.o.k.		1											1
Total other defects														

pareto-analysis of failures

PPM-STAT V. 2.3.4

Testsystem QES/W Oberfrank B. 14.06.2004

PPM-STAT

Failurerecord 602695

Date: 15.06.2004 Testsystem QESW Oberfrank B.

Materialnumber: 602695

UPA-Sensor 3.Gen (EPP) (BMW)

Date: 17/06/04

Name: Peter Mayer Checked parts: 325 Shift: Early/Late/Night

Code	Defect	Quantity			Total
		10	20	30	
00024	Phantomsignal	0000000000	0000000000	0000000000	2
00052	Attenuation time n.o.k.	0000000000	0000000000	0000000000	
00058	Level difference n.o.k.	0000000000	0000000000	0000000000	
00059	Level difference to high	0000000000	0000000000	0000000000	
00060	Level difference to low	0000000000	0000000000	0000000000	1
00067	Sensitivity centre n.o.k.	0000000000	0000000000	0000000000	
00070	Membrane wrong	0000000000	0000000000	0000000000	
00071	Housing cover wrong	0000000000	0000000000	0000000000	
00076	HF-wire jammed	0000000000	0000000000	0000000000	
00077	Impulse after sending	0000000000	0000000000	0000000000	
00082	Contacting n.o.k.	0000000000	0000000000	0000000000	
00090	Ground wire jammed	0000000000	0000000000	0000000000	
00091	Inclination of the membrane	0000000000	0000000000	0000000000	

PPM-STAT

Main functions:

- 3 languages (German, English, Hungarian)
- EOL/ TLR/ Line>Returns/ Warranty/ Actions
- Standard-Statistics (Week, Month, Year)
- Materialgroups (Productfamily/ APU/ Plant)
- Customergroups
- Top-Down-Analysis to partnumber/ failure
- Import of deliveries from SAP R/3
- Import of external failures from Excel-File
- Batch-statistics for reoccurring reports

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Output:

Example EOL Yearstatistics

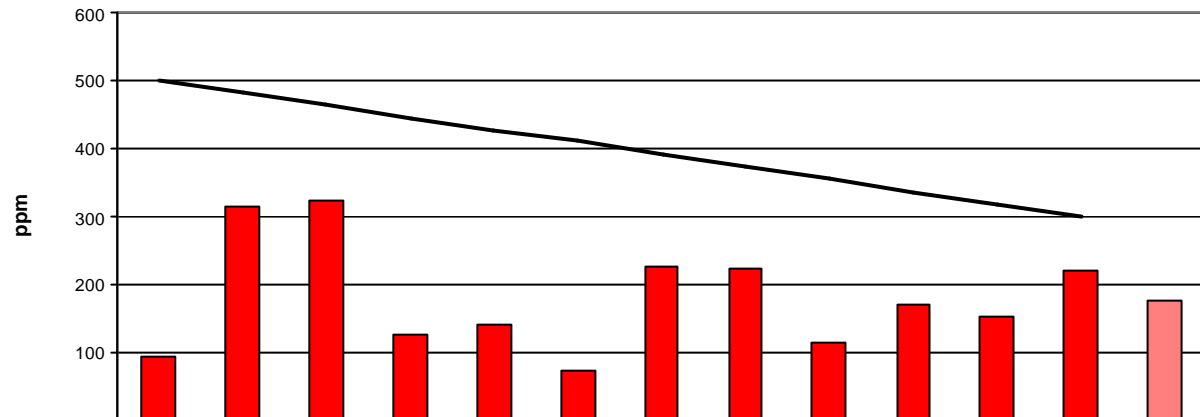
The screenshot shows the 'Statistics' dialog box with the following settings:

- Failure:**
 - ☒ EOL
 - ☐ TLR ☒ EOL summarized
 - ☐ Line Return
 - ☐ Warranty
- Part:**
 - Materialnumber:
 - or
 - Materialgroup:
- Customer:**
 - Customernumber:
 - or
 - Customergroup:
- Time-area:**
 - ☐ weeks ☐ 30 days ☐ 3 months rolling
 - ☒ year ☐ 90 days ☐ 6 months rolling
 - ☐ 12 months ☐ 12 months rolling
 - month year ☐ MAF-Rule
 - till
- Production date:**
 - ☒ Production date
 - ☐ Date of return
- ☒ delivery quantity out of SAP
- Sort:**
 - ☐ actual time-area
 - ☒ total
- Filter:**
 - Failurecode:
- Actions:**
 - ☒ with actions
- Language:**
 - ☐ german
 - ☒ english
 - ☐ hungarian

Buttons at the bottom:

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90000 PTS
Internal Failure EOL per month 12 - 2003



Actions

Period	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Checked parts	454776	287487	318889	289045	275111	277196	259231	165608	253143	225056	204819	191191	3201552
Failure parts	42	90	103	36	38	20	58	37	29	38	31	42	564
Delivered parts	454734	287397	318786	289009	275073	277176	259173	165571	253114	225018	204788	191149	3200988
Failure PPM	92	313	323	125	138	72	224	223	115	169	151	220	176
Budget PPM	500	482	464	445	427	409	391	373	355	336	318	300	

Defects

Defects	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
00154 Tightness n.o.k.	11	9	9	8	10	4	30	13	21	13	7	18	153
00117 Upper TPO switch point n.o.k.	6	6	16	14	14	2	7	16	4	21	16	2	124
00126 Total loss	14	15	23	7	4	5	5	1	1	2	1		77
00118 Lower TPO switch point n.o.k.	3	42			2	1		1			3	14	66
00157 El.function n.o.k.	1	1	41	2	4	1	1	1	3	2			57
00128 Running mode "far" n.o.k.	5	11		1	1	4	6	1			4	6	39
00131 Threshold update n.o.k.	2	3		1	1	2	7	3					19
00124 Phase pos. "rising edge" n.o.k		1	9				1	1					12
00125 Phase pos. "fall. edge" n.o.k.			4					1					5
00129 Upper TPO switch point >5,3			1	1	1	1	1						5
01361 Laser-Inscription n.o.k.												2	2
00218 Moulding fault		1		1									2
00179 Clamping part not locked					1								1
00130 Lower TPO switch point >5,3				1									1
00127 Running mode "near" n.o.k.		1											1
Total other defects													

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Testsystem QES/W Oberfrank B. 15/06/2004

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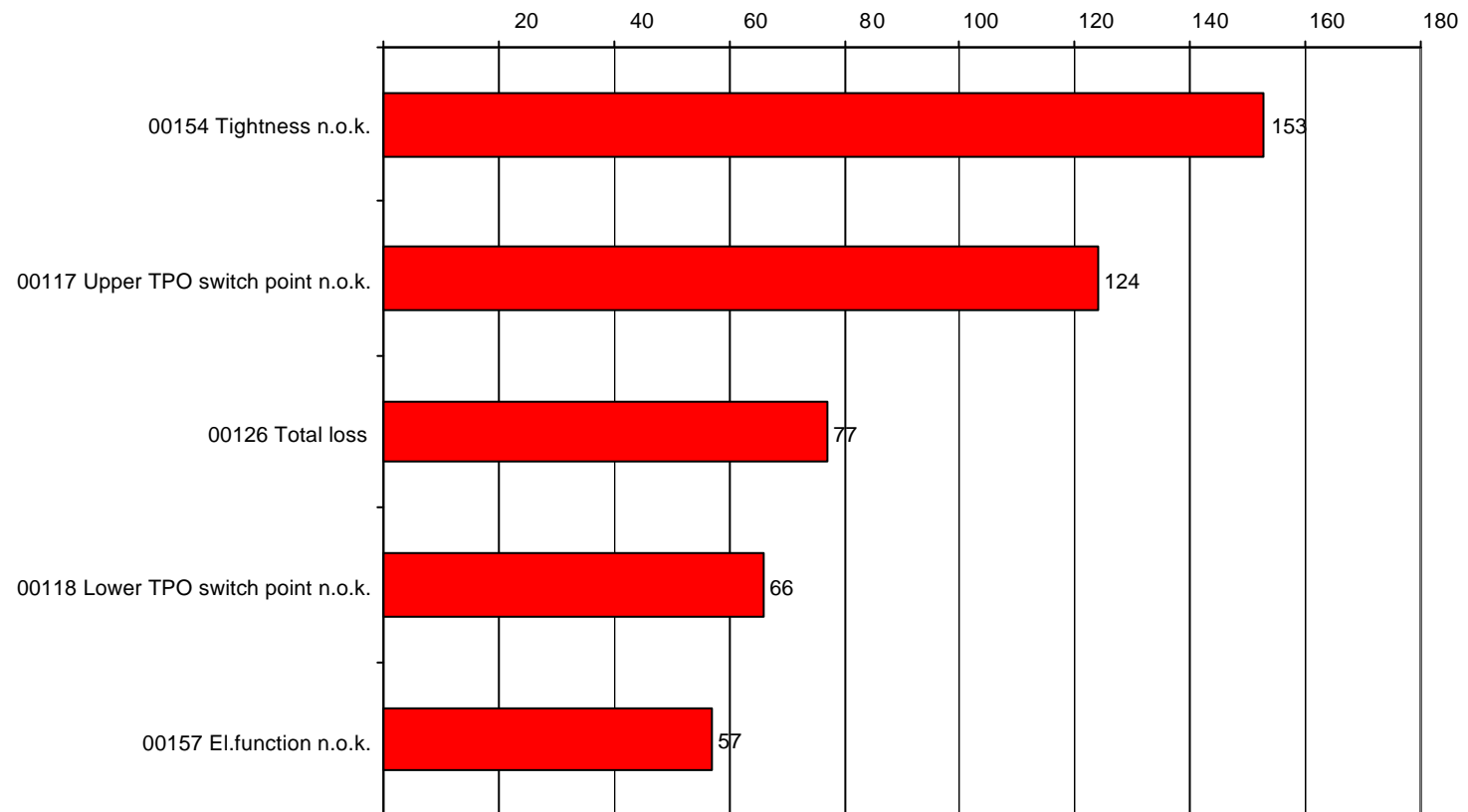
90000 PTS Internal Failure EOL per month 12 - 2003

No.	Date	Action	Partnumber	Partgroup	Customergroup	Failurecode	PDCA/8D
#1	10/11/2003	change of design		90000			
#2	11/11/2003	change of process		90000			
#3	10/12/2003	new supplier		90000			

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90000 PTS
Internal Failure EOL per month 12 - 2003

TOP 5 Failure parts



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90000 PTS Internal Failure EOL per month 12 - 2003

Period	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Checked parts	454776	287487	318889	289045	275111	277196	259231	165608	253143	225056	204819	191191	3201552
Failure parts	42	90	103	36	38	20	58	37	29	38	31	42	564
Delivered parts	454734	287397	318786	289009	275073	277176	259173	165571	253114	225018	204788	191149	3200988
Failure PPM	92	313	323	125	138	72	224	223	115	169	151	220	176
Budget PPM	500	482	464	445	427	409	391	373	355	336	318	300	
New Target PPM	0	0	0	0	0	0	0	0	0	0	0	0	
Code Defects													
00154 Tightness n.o.k.	11	9	9	8	10	4	30	13	21	13	7	18	153
00117 Upper TPO switch point n.o.k.	6	6	16	14	14	2	7	16	4	21	16	2	124
00126 Total loss	14	15	23	7	4	5	5	0	1	2	1	0	77
00118 Lower TPO switch point n.o.k.	3	42	0	0	2	1	0	1	0	0	3	14	66
00157 El.function n.o.k.	1	1	41	2	4	1	1	1	3	2	0	0	57
00128 Running mode "far" n.o.k.	5	11	0	1	1	4	6	1	0	0	4	6	39
00131 Threshold update n.o.k.	2	3	0	1	1	2	7	3	0	0	0	0	19
00124 Phase pos. "rising edge" n.o.k	0	1	9	0	0	0	1	1	0	0	0	0	12
00125 Phase pos. "fall. edge" n.o.k.	0	0	4	0	0	0	0	1	0	0	0	0	5
00129 Upper TPO switch point >5,3	0	0	1	1	1	1	1	0	0	0	0	0	5
01361 Laser-Inscription n.o.k.	0	0	0	0	0	0	0	0	0	0	0	2	2
00218 Moulding fault	0	1	0	1	0	0	0	0	0	0	0	0	2
00179 Clamping part not locked	0	0	0	0	1	0	0	0	0	0	0	0	1
00130 Lower TPO switch point >5,3	0	0	0	1	0	0	0	0	0	0	0	0	1
00127 Running mode "near" n.o.k.	0	1	0	0	0	0	0	0	0	0	0	0	1

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Output:

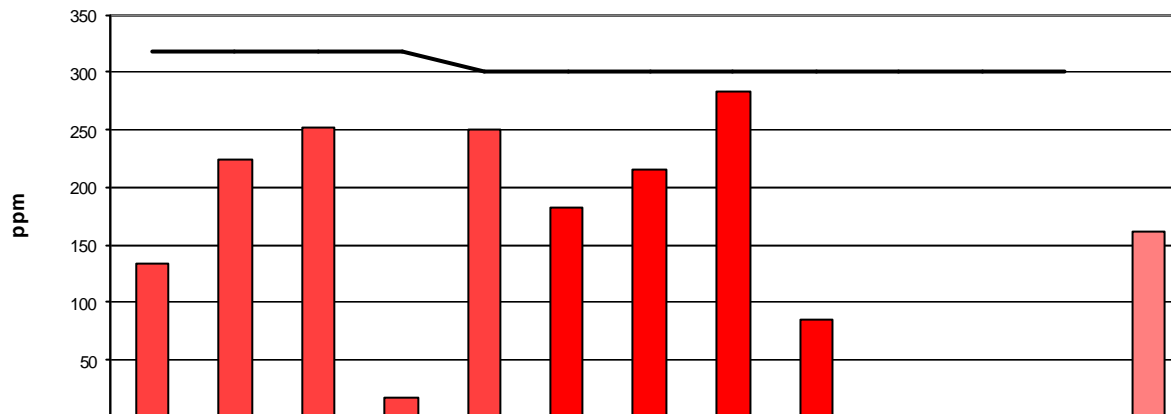
Example EOL Weekstatistics

The screenshot shows the 'Statistics' dialog box with the following settings:

- Failure:**
 - ☒ EOL
 - ☐ TLR ☒ EOL summarized
 - ☐ Line Return
 - ☐ Warranty
- Part:**
 - Materialnumber:
 - or
 - Materialgroup:
- Customer:**
 - Customernumber:
 - or
 - Customergroup:
- Time-area:**
 - ☒ weeks ☐ 30 days ☐ 3 months rolling
 - ☐ year ☐ 90 days ☐ 6 months rolling
 - ☐ 12 months ☐ 12 months rolling
 - ☐ MAF-Rule
 - till:
- Sort:**
 - ☐ actual time-area
 - ☒ total
- Filter:**
 - Failurecode:
- Production date:**
 - ☒ Production date
 - ☐ Date of return
- Actions:**
 - ☒ with actions
- Language:**
 - ☐ german
 - ☒ english
 - ☐ hungarian
- Buttons:** Excel, Batch, Cancel

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90000 PTS
Internal Failure EOL week 50 - 2003

[illegible][illegible]

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Testsystem QES/W Oberfrank B. 15/06/2004

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Output:

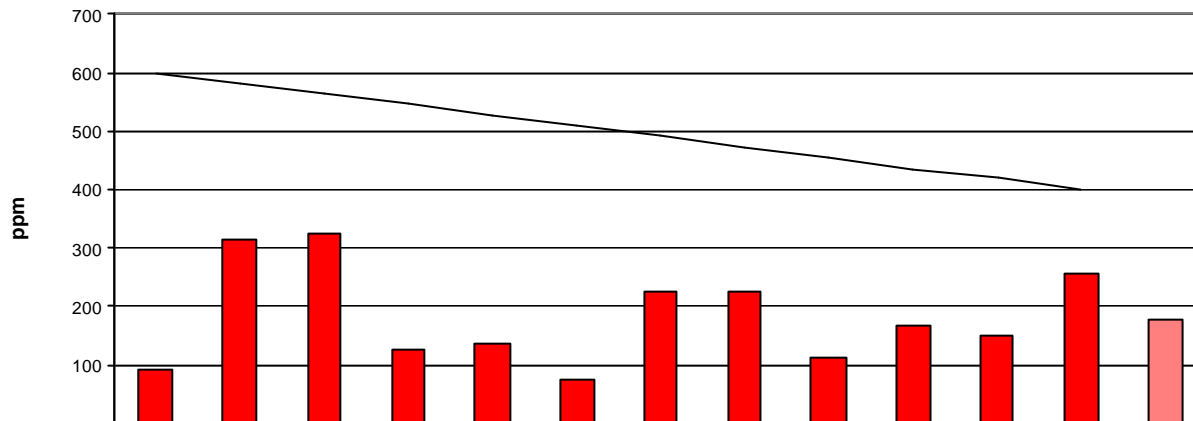
Example TLR Yearstatistics

The screenshot shows the 'Statistics' dialog box with the following settings:

- Failure:**
 - ☐ EOL
 - ☒ TLR ☒ EOL summarized
 - ☐ Line Return
 - ☐ Warranty
- Part:**
 - Materialnumber:
 - or
 - Materialgroup:
- Customer:**
 - Customernumber:
 - or
 - Customergroup:
- Time-area:**
 - ☐ weeks ☐ 30 days ☐ 3 months rolling
 - ☒ year ☐ 90 days ☐ 6 months rolling
 - ☐ 12 months ☐ 12 months rolling
 - ☐ MAF-Rule
 - till:
- Sort:**
 - ☐ actual time-area
 - ☒ total
- Filter:**
 - Failurecode:
- Actions:**
 - ☒ with actions
- Language:**
 - ☐ german
 - ☒ english
 - ☐ hungarian
- Buttons:** Excel, Batch, Cancel

PPM-STAT

90000 PTS
Internal Failure TLR per month 12 - 2003



Actions											#1 - #2	#3	
Period	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Checked parts	454776	287487	318889	289045	275111	277196	259231	165608	253143	225056	204819	191198	3201559
Failure parts	42	90	103	36	38	20	58	37	29	38	31	49	571
Delivered parts	454734	287397	318786	289009	275073	277176	259173	165571	253114	225018	204788	191149	3200988
Failure PPM	92	313	323	125	138	72	224	223	115	169	151	256	178
Budget PPM	600	582	564	545	527	509	491	473	455	436	418	400	

[illegible]

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Testsystem QES/W Oberfrank B. 15/06/2004

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Output:

Example
Line Return
per production date
Yearstatistics

Similar:

- per Date of Return
- Warranty

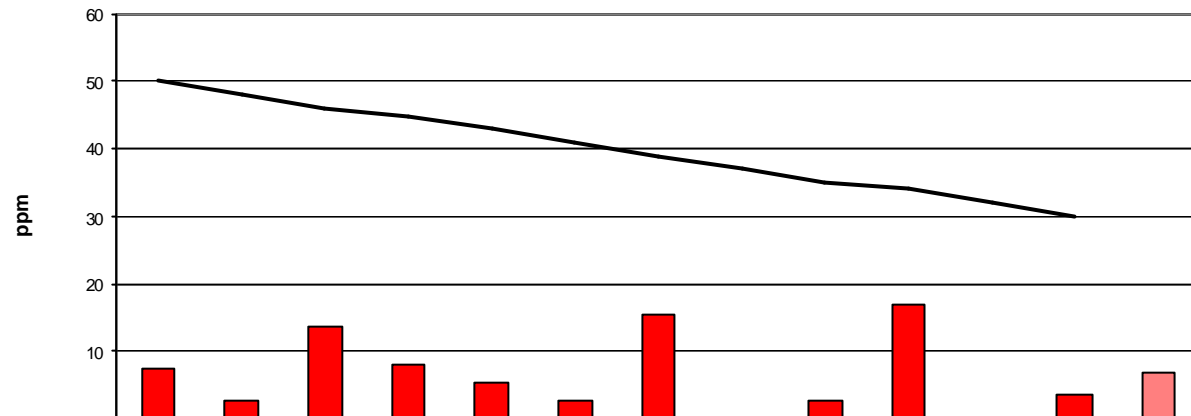
The screenshot shows the 'Statistics' dialog box with the following settings:

- Failure:**
 - ☐ EOL
 - ☐ TLR ☒ EOL summarized
 - ☒ Line Return
 - ☐ Warranty
- Part:**
 - Materialnumber:
 - or
 - Materialgroup:
- Customer:**
 - Customernumber:
 - or
 - Customergroup:
- Time-area:**
 - ☐ weeks ☐ 30 days ☐ 3 months rolling
 - ☒ year ☐ 90 days ☐ 6 months rolling
 - ☐ 12 months ☐ 12 months rolling
 - ☐ MAF-Rule
 - till
- Production date / Date of return:**
 - ☒ Production date
 - ☐ Date of return
- delivery quantity out of SAP:**
 - ☒
- Sort:**
 - ☐ actual time-area
 - ☒ total
- Filter:**
 - Failurecode:
- Actions:**
 - ☒ with actions
- Language:**
 - ☐ german
 - ☒ english
 - ☐ hungarian

Buttons at the bottom:

PPM-STAT

90000 PTS
Line Return per productionmonth 12 - 2003



Actions

productiondate	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Delivered parts	399693	405899	436006	382161	372406	353145	326734	270016	406384	357208	330613	296301	4336566
Approved returns	3	1	6	3	2	1	5	0	1	6	0	1	29
- no failure detected	8	3	2	1	5	2	0	1	1	3	0	0	26
- customer failure	4	1	0	0	0	0	2	4	5	5	0	10	31
Failure PPM	8	2	14	8	5	3	15	0	2	17	0	3	7
Budget PPM	50	48	46	45	43	41	39	37	35	34	32	30	

Defects

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
K0000 customer failure general	4	1					2	4	5	5			21
00166 Hall-IC faulty			1	3	1	1	3		1	3			13
00218 Moulding fault	3		5							3			11
K0004 customer failure soldering pin(IC)												4	4
K0003 customer failure soldering Hall-IC												3	3
K0002 customer failure soldering diode												2	2
00083 Short circuit by melted solder												1	1
K0001 customer failure ESD												1	1
00174 Dry joint at the cable							1						1
00256 Electronical part defect							1						1
01981 shortcircuit in holder					1								1
00192 Soldering point broken (diode)		1											1

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Testsystem QES/W Oberfrank B. 15/06/2004

PPM-STAT

Input:

Example
Internal Failure

The screenshot shows a software window titled "Internal Failure". It contains a "General" section with input fields for Date (15/06/2004), Materialnumber (602121), Checked parts (1200), Target PPM, EOL (4091), TLR (6091), and two sets of EOL/TLR values (2/1667 and 1/2498). Below this is a "Failurerecord" section with a table listing failure codes, captions, and amounts.

Code	Caption	Amount
00135	Connecting pin damaged	1
00151	Lettering/markings n.o.k.	0
00154	Tightness n.o.k.	1
00157	El.function n.o.k.	0
00178	Harness faulty	0
00218	Moulding fault	0
01491	isolation n.o.k.	0
01492	sensor wrong assembled	0
T0001	crimping	1
T0002	soldering	0

Buttons: Save, Undo

PPM-STAT

Input:

Example
Line Return

Similar:
- Warranty

Remark:
- Import of returns from Excel-File
- Import of deliveries from SAP R/3

The screenshot shows a software window titled "Line Return". It contains several input fields and a table. The "General" section includes fields for Materialnumber (602121), Customer number, Date of return, Production date, Built in date, Removal date, Identity number, Chassis number, Customer part no., Performance in km (0), Type, No failure detected (0), Approved returns, and Cust. failure. The "Failure record" section contains a table with columns Code, Caption, and Amount.

Code	Caption	Amount
00135	Connecting pin damaged	0
00151	Lettering/marketing n.o.k.	0
00154	Tightness n.o.k.	0
00157	El.function n.o.k.	0
00178	Harness faulty	0
00218	Moulding fault	0
01491	isolation n.o.k.	0
01492	sensor wrong assembled	0
K0000	customer failure general	0

PPM-STAT

Input:
Example
Corrective Actions

Remark:
- in 3 Languages possible

The screenshot shows a software window titled "Actions" with a standard Windows-style toolbar. The main area is a form with the following fields and controls:

- General** section:
- Startdate:** A date picker set to 15/06/2004.
- Group:** A label.
- Materialnumber:** A text input field with a search icon.
- Materialgroup:** A text input field with a search icon.
- Customergroup:** A text input field with a search icon.
- Failurecode:** A text input field with a search icon.
- PDCA / 8D - Report:** A text input field.
- Checkboxes:** Three checked checkboxes labeled "Internal Failure", "Line Return", and "Warranty".
- Text areas:** Three large text areas for "german text for actions:", "english text for actions:", and "hungarian text for actions:", each with a vertical scrollbar.
- Buttons:** "Save" and "Undo" buttons at the bottom.

PPM-STAT

Masterdata:

- Failurecode
- Failuregroup
- Materialnumber
- Materialgroup
- Customer
- Customergroup
- Vehicletype

