AUSTRALIAN ARROW PTY. LTD.

Quality Systems Requirements

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1.0 AAPL Supplier Quality Policy

Australian Arrow's (AAPL) policy is to select those Suppliers whom have formal certification to ISO/TS 16949:2002.

In addition, AAPL would consider that selection, based upon the capability of the Supplier to deliver quality product, under the following criteria -

- **Processes, and Equipment** – having the processes and equipment to produce quality products, and/or having subcontractors that would deliver the same.
- **Technology** – having expertise in product design and process development, relevant to the type of product supplied. The Supplier should have personnel who know, and understand all aspects of the process and product, and have experience designing and producing reliable products in a cost-effective manner.
- **Capability** – a demonstrated ability to produce at the required quantity and quality.
- **Passion** – a commitment from the Supplier's management to take on the contract responsibilities.

Where a Supplier does not intend to attain certification to the aforementioned standard, the Supplier should be willing to comply with AAPL's directions, or recommendations, in relation to the requirements of ISO/TS 16949:2002.

AAPL shall establish, and maintain, close and mutually beneficial working relationships with Suppliers, on all matters.

2.0 General System Requirements

2.1 Quality Management System

It is AAPL's expectation, that the Supplier will have a formal Quality System in place. It may be one of the following, depending upon the size, and complexity of the operation -

- ISO/TS 16949:2002,
- ISO 9001:2000, or
- Self-Developed System, with Customer approval.

For any components, or products destined for Automotive Customers, AAPL will be using Quality Management Systems based upon ISO/TS 16949.

2.2 Supplier Development

AAPL will undertake to assist the Supplier in developing a Quality Management System, with the goal being conformity with ISO/TS 16949:2002. Conformity with ISO 9001:2000, is the first step in achieving that goal. The prioritization of the Supplier for development, will be dependant upon the Supplier's 'Quality Performance', and the nature of the component, or product supplied.

Should a Supplier be selected for development, a formal process will be implemented. This may include interchange of personnel, skills, and technical support. Main development activities may centre on the use of the FMEA, and PCP forms, and the utilization of the APQP process.

3.0 Common Requirements

3.1 Corrective and Preventive Action

The Supplier shall have a formal, and documented 'Corrective, and Preventive Action' system in place, to address incidents of non-conformance, or potential non-conformance. The system should consider both internal and external non-conformance.

The Supplier shall complete an '8-D Improvement' report, when requested by AAPL SQA. This should be forwarded to the AAPL SQA department, for review, within the given timeframes, as detailed below. An example of an 8-D report is located in Section 6 of this manual.

The Supplier may be requested to support on-site sorting activities at AAPL or its Manufacturing Plants, or agree to reimburse AAPL for costs associated with sorting activities. This may include contract labour. AAPL Purchasing will negotiate cost recovery.

The Supplier is requested to use recognized problem solving techniques, which may include any of the following -

- 8-D Problem Solving Discipline,
- Ishikawa (Fishbone analysis),
- 5-Why Analysis,
- Pareto Analysis.

In the event of non-conformance detected by AAPL, the Supplier shall provide to AAPL SQA, the following information, within the given timeframes:

- **Containment Actions** - 24-hours, immediate
- **Corrective Action** - 30-days, including evidence of actions taken
- **Closure** - 60-days, including evidence of effectiveness

In the event of a non-conformance detected by Customer (e.g. Holden Limited, MMAL, TMCA, VTC), the Supplier shall provide the following information to AAPL SQA, within the given timeframes –

- **Containment Actions** - 24-hours response and
- **Corrective Action** - 10 working days, including evidence of actions taken

3.2 Breakpoint Advice

The Supplier shall have a process in place to identify, notify, and communicate any changes in component, or product specifications, or changes in process, when these are delivered to AAPL, or its designated Manufacturing Plant(s). The reason for the change should also be documented. Refer to the PPAP Manual, for further clarification.

3.3 Document and Data Control

Documents, and data provided by AAPL, must be properly controlled.

3.4 Records

Relevant Records pertaining to components and products supplied to AAPL, or its designated Manufacturing Plant(s), should be identified, and properly maintained. Retention times should be specified, and documented.

Quality Records are required to be kept for a minimum of fifteen (15) years. This time period satisfies Customer specific Section 11 requirements.

3.0 Common Requirements (Continued)

3.5 Handling, Packaging, Storage, Preservation, and Transport

There should be appropriate 'Handling, Packaging, Storage, Preservation, and Transportation' processes, and materials in place, to assure the quality and reliability of components and products being shipped to AAPL, or its designated Manufacturing Plant(s). Refer to AAPL's Wiring Harness, and Electronics Purchasing Departments specific standards.

3.6 Labeling

The Supplier shall use industry standard labels, and as agreed to by AAPL. Refer to Purchasing department specific requirements.

The Supplier is requested to use **orange** coloured labels for Trial Build, Pilot, or PPAP sample deliveries. The label should clearly state whether the samples are Trial Build, Pilot, or PPAP samples, and include standard label information, as per above requirement. Refer to AAPL's Wiring Harness, and Electronics Purchasing Departments specific standards.

3.7 Notification of Quality Concerns

The Supplier shall have a process in place to ensure that AAPL is informed of any potential quality concerns with components, or products, that may impact upon product quality, or reliability. This information should be provided to AAPL SQA.

3.8 Field Concerns and Warranty

In the event of 'Field Concerns', or 'Warranty Returns', AAPL would expect full co-operation by the Supplier, in determining root cause, and developing and implementing effective countermeasures. 'Action Plans' should be developed, and implemented in a timely manner, so as to minimize negative Customer impact.

AAPL's Purchasing Department will negotiate cost recovery on an individual case by case basis.

3.9 Continual Improvement

The Supplier shall have a 'Continual Improvement' philosophy, in trying to reduce cost, while maintaining, or improving upon product quality, and reliability.

The Supplier would be required to submit an annual 'Improvement Plan', to evidence that Continual Improvement is a defined process. This 'Improvement Plan' should be provided to AAPL SQA.

3.10 Quality Audit

AAPL's Purchasing and SQA departments may perform Quality Audits for potential Supplier's, for any of the following reasons -

- System Audit for a potential new Supplier to AAPL.
- Product Audit for previously identified non-conformance, prior to shipment to AAPL.
- Process, and/or a System Audit for existing Suppliers to AAPL.

It is AAPL's expectation that the Supplier would provide an Improvement Plan for any non-conformances identified in the Audit processes, within 30 days of receipt of the Audit Report/AAPL Audit Actions List. As per Corrective Action requirements, the Improvement Plan should include evidence of actions taken, or planned.

3.0 Common Requirements (Continued)

3.11 Deviation to Product, Process or Material

The Supplier shall obtain a concession for any component, product, or manufacturing process that deviates from that which is currently approved.

The concession should be for a finite quantity, or apply for a specified time period.

Components subsequently shipped to AAPL would require proper identification on each container.

This process requirement should also apply to the Supplier's purchased product.

3.12 Traceability

The Supplier shall identify the product by suitable means throughout its manufacturing process, and identify product status with respect to monitoring and measurement requirements.

3.13 Supplier's Incoming Material

The Supplier shall ensure that its purchased product meets specified purchase requirements.

The Supplier shall have a process to assure the quality of its purchased product.

3.14 Sub-Contracting

Where the Supplier requires to re-locate the manufacture of AAPL material to an alternate site, prior approval must be sought from AAPL Purchasing, and SQA departments. This re-location would require a re-submission of PPAP samples, and associated documentation.

The Supplier should consider maintaining an approved vendor listing.

3.15 Change Control

The Supplier shall have a process to control, and react to changes.

3.16 Supplier Performance Rating

AAPL SQA will provide a quarterly assessment to selected Suppliers, based upon the following metrics:

- Delivery Rating - 25 % of total rating
- Quality Rating - 25 % of total rating
- Supplier Structure - 10 % of total rating
- SQA Rating - 15 % of total rating
- Value of Relationship - 25 % of total rating

It is expected that the supplier will monitor its performance against the five evaluation criteria, and submit an Improvement Plan to AAPL SQA, should its overall 'Total Supplier Rating' fall below the set minimum requirement. Refer to AAPL's 'Supplier Rating' system.

3.17 Controlled Shipment

Controlled Shipment is a request from AAPL to a Supplier, to put in place an additional inspection process at the Supplier's location, to sort for non-conforming components, or products.

4.0 Specific Requirements

4.1 Advanced Product Quality Planning

The 'Advanced Product Quality Planning' process, or its equivalent, is highly recommended for those Suppliers involved in assisting AAPL design components, or develop products. AAPL would expect Suppliers to have a well developed and implemented APQP system, or equivalent, and appropriate to the complexity of the component or product being supplied.

Whatever Quality Planning process the Supplier utilizes, AAPL would expect the Supplier to participate in AAPL APQP activities, as requested, e.g. FMEA'S, and Project Review Meetings.

4.2 Production Part Approval Process

The 'Production Part Approval Process' requires that an important set of documents are provided with part submissions, to evidence that the component or product has been properly developed, and meets all applicable specifications.

PPAP **Level 3** is the default level to be utilized for all submissions to AAPL, unless otherwise specified, or negotiated with AAPL's SQA department.

Refer to the Latest Revision of PPAP Manual, for specific requirements.

The Supplier shall submit the requisite PPAP sample part quantity, as directed by AAPL's SQA department. In addition, the SQA representative may waive the requirement for submission in some cases.

4.2.1 Part Submission Warrant

This requirement applies for each part supplied to AAPL, and will include the below supporting documentation, as appropriate. See an example of a standard format, as attached in section 6 of this manual.

4.2.2 Appearance Approval Report

Required to be submitted, where specified on AAPL drawings. See an example of a standard format, as attached in section 6 of this manual.

4.2.3 Dimensional Results

The Supplier shall provide evidence that dimensional results comply with drawing requirements. See an example of a standard format, as attached in section 6 of this manual.

4.2.4 Material Test Results

Required to be submitted, where specified on AAPL drawings. See an example of a standard format, as attached in section 6 of this manual.

4.2.5 Performance Test Results

Required to be submitted, where specified on AAPL drawings. See an example of a standard format, as attached in section 6 of this manual.

4.0 Specific Requirements (Continued)

4.3 Production Part Approval Process

4.3.1 Process Control Plan

The Process Control Plan can be separated into three distinct phases of product development. These include:

- Prototype Control Plan. As requested by AAPL SQA.
- Pre-Launch Control Plan. As requested by AAPL SQA.
- Production Control Plan. Required to be submitted with PPAP submissions.

4.3.2 Process Flow Chart

Required to be submitted with PPAP submissions.

4.3.3 Process Failure Mode and Effects Analysis

Required to be submitted with PPAP submissions.

4.3.4 Initial Process Capability Study

Required to be submitted with PPAP submissions.
Cpk/Ppk acceptance criteria for initial study

>1.67	- The process currently meets acceptance criteria
1.33 – 1.67	- The process maybe acceptable. Contact AAPL SQA for review of the study results
<1.33	- The process does not currently meet the acceptance criteria. Contact AAPL SQA for a review of the study results.

4.3.5 Measurement Systems Analysis

Required to be submitted with PPAP Submissions. For processes which involves a lot of visual inspection, an Attribute GR&R is required to be submitted. For all other critical variable characteristics, an Average and Range method of GR&R (variable GR&R) is required to be submitted. AAPL recommends for %GR&R to be calculated based on Total Variation. Sample form is section 6 of this manual.
Acceptance criteria for %GR&R

< 10%	- The measurement system is acceptable
10 – 30%	- The measurement system maybe acceptable depending on the importance of application, cost of measurement device, cost of repair etc. Contact AAPL SQA for review of study results.
> 30%	- The measurement system is not acceptable. AAPL requires an improvement plan to the measurement system.

4.3.6 Initial Process and Product Evaluation Study

AAPL SQA, in conjunction with Purchasing, will review the Supplier's production capability for new, or changed parts, or processes. This activity is to evaluate tooling, error proofing, tact time, operator training, production documentation, process flow and controls, capacity, and quality levels.

4.3.7 Records of Compliance to Substances of Concern (SOC) or IMDS

The Supplier will be required to submit IMDS node ID and Substances of Concern (SOC) declaration using the form as attached in Section 6 of this manual.

PPAP submission will not be approved without this specific requirement.

4.3.8 GP 12 or Early Containment Control Plan

The Supplier will be required to submit a plan for GP 12 or Early Containment Plan of activities. This plan may involve, but is not limited to, additional inspection or testing on top of what is defined in the process control plan, before delivery to AAPL for a period of 3 months.

4.4 Corporate Social Responsibility

It is AAPL's expectation that the Supplier is socially and environmentally responsible and shall cooperate in the areas outlined in AAPL's 'Sustainable Purchasing Policy'.

- Legal Compliance
- Protection of Information
- Anti-corruption
- Human Rights
- Labour Standards
- Health & Safety
- Resource and Energy Efficiency
- Water Conservation
- Emission, Effluent and Waste Management

AAPL welcomes clear and written policies to address these issues. In addition, the supplier shall plan towards, and implement an Environmental Management System, preferably ISO 14001:2004. This shall address all governmental, safety, and environmental regulations, for storage, safe handling, recycling, and disposal of materials, as these relate to AAPL purchased product. At a minimum, AAPL would suggest suppliers to measure and report on performance information regarding paper usage, energy consumption, water withdrawal, GHG and other emissions, total waste and waste to landfill (or incineration) in an attempt to minimizing waste, and pollution, and to promote recycling activities.

The Supplier should consider the implementation of an OHS management system but shall at the very minimum record injury information, identify occupational hazards, identify risks and manage their treatment in order to provide a safe and healthy workplace for all employees.
Also, a process needs to be in place to ensure product safety.

The Supplier should maintain its premises in a state of order, cleanliness, and maintenance consistent with the product requirements, and the manufacturing processes utilized. AAPL strongly recommends the adoption of a '5S' philosophy

5.0 Customer Specific Requirements

AAPL undertakes to communicate Customer specific Section 11 requirements via the component specific 'PPAP Checklist' provided to the Supplier. See example in Section 6 of this manual. Customer specific Section 11 audits, will be scheduled accordingly.

For reference purposes, the following Customer Section 11 manuals are available for review at AAPL, or on its web site.

- TMCA, "6S Manual"
- Holden Limited, "GM9000"
- MMAL, "3 Diamond Quality Manual"
- VTC, "Purchasing Quality Procedures"

8.0 Forms

All forms are at the end of the document.

7.0 "Quality System Requirements' Manual Change History

Date	Revision	Change Summary
September 12, 2002	I	Draft
September 27, 2002	A	Initial Release
May 05, 2008	B	1. Updated 3.16 to reflect actual figures in the Supplier Rating Scheme 2. Added in 4.3.4 the acceptance criteria for Cpk/Ppk 3. Added in 4.3.5 AAPL's preference in the calculation of % GR&R and define the acceptance criteria for %GR&R 4. Changed 4.3.7 from Material Safety Data Sheet requirement to Records of Compliance to Substances of Concern and IMDS 5. Added 4.3.8 for GP 12 or Early Containment Control Plan
May 20, 2010	C	Amended 4.4 to Corporate Social Responsibility

8.0 Glossary

APQP	-		Advanced Product Quality Planning
FMEA	-		Potential Failure Mode and Effects Analysis
PCP	-		Process Control Plan
5S	-	5 Disciplines	- Sort - Systemize - Clean - Standardize - Self Discipline and Safety

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FORMS:

1. 8D Improvement

AAPL	8D IMPROVEMENT	REFERENCE
ADDRESSEE	**ATTENTION**	**DATE OPENED**
DESCRIBE CONCERN Date:		**REJECT RATE SCORE** 0 point : 0 ppm 2 points : 0-50 ppm 4 points : 51-200 ppm 6 points : 201-400 ppm 8 points : 401-600 ppm 10 points : 601-800 ppm 12 points : 801-1000 ppm 14 points : 1001-1200 ppm 15 points : >1200 ppm **SEVERITY SCORE** 2 points : Minor 4 points : Major 10 points : Critical

CONTAINMENT ACTION	**% EFFECTIVE**	**TEAM MEMBERS**
DATE		

DEFINE ROOT CAUSES	**% CONTRIBUTION (Each Case)**
DATE:	

VERIFY EFFECTIVENESS OF PLANNED ACTION
DATE:

IMPLEMENT CORRECTIVE ACTION
DATE:

ACTION TO RPEVENT RECURRENCE

BREAKPOINT DATE:	**BREAKPOINT BATCH:**	**VERIFICATION DATE:**
TEAM LEADER	**AREA MANAGER**	**QUALITY MANAGER**
DATE	**DATE**	**DATE**

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2. CFG 1001 PSW

DaimlerChrysler Ford GM

Part Submission Warrant

Part Name ____ Cust. Part Number ____

Shown on Drawing No. ____ Org. Part Number ____

Engineering Change Level ____ Dated ____

Additional Engineering Changes ____ Dated ____

Safety and/or Government Regulation ☐ Yes ☐ No Purchase Order No. ____ Weight (kg) ____

Checking Aid No. ____ Checking Aid Engineering Change Level ____ Dated ____

ORGANIZATION MANUFACTURING INFORMATION

____
Supplier Name & Supplier Code

____
Street Address

____
City State Zip

CUSTOMER SUBMITTAL INFORMATION

Australian Arrow Pty. Ltd.
Customer Name/Division

Buyer/Buyer Code **Marion McCrone**

Application ____

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? ☐ YES ☐ NO ☐ n/a

Submitted by IMDS or other customer format: ____

Are polymeric parts identified with appropriate ISO marking codes? ☐ YES ☐ NO ☐ n/a

REASON FOR SUBMISSION

☐ Initial Submission
☐ Engineering Change(s)
☐ Tooling: Transfer, Replacement, Refurbishment or additional
☐ Correction of Discrepancy
☐ Tooling Inactive > 1 year
☐ Change to Optional Construction or Material
☐ Sub-Supplier or Material Source Change
☐ Change in Part Processing
☐ Part Produced at Additional Location
☐ Other - Please specify below ____

REQUESTED SUBMISSION LEVEL (Check one)

☐ Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
☐ Level 2 - Warrant with product samples and limited supporting data submitted to customer.
☐ Level 3 - Warrant with product samples and complete supporting data submitted to customer.
☐ Level 4 - Warrant and other requirements as defined by customer.
☐ Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.

SUBMISSION RESULTS

The results for ☐ dimensional measurements ☐ material and functional tests ☐ appearance criteria ☐ statistical process package

These results meet all drawing and specification requirements: ☐ YES ☐ NO (If "NO" - Explanation Required)

Mold / Cavity / Production Process ____

DECLARATION

I hereby affirm that the samples represented by this warrant are representative of our parts, have been made to the applicable Production Part Approval Process Manual 4th Edition Requirements. I further affirm that these samples were produced at the production rate of ____ / ___ hours. I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.

EXPLANATION/COMMENTS: ____

Is each Customer Tool Properly tagged and numbered? ☐ YES ☐ NO ☐ n/a

Organization Authorized Signature ____ Date ____

Print Name ____ Phone No. ____ Fax No. ____

Title ____ E-mail ____

FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part Warrant Disposition: ☐ Approved ☐ Rejected ☐ Other ____

Customer Signature ____ Date ____

Print Name ____ Customer Tracking Number (optional) ____

March 2006 **CFG-1001**

DaimlerChrysler Ford GM

APPEARANCE APPROVAL REPORT

PART NUMBER		DRAWING NUMBER		APPLICATION (VEHICLES)	
PART NAME		BUYER CODE		E/C LEVEL	DATE
SUPPLIER NAME		MANUFACTURING LOCATION		SUPPLIER CODE	
REASON FOR SUBMISSION	☐ PART SUBMISSION WARRANT ☐ PRE TEXTURE	☐ SPECIAL SAMPLE ☐ FIRST PRODUCTION SHIPMENT	☐ RE-SUBMISSION ☐ ENGINEERING CHANGE	CODE	

APPEARANCE EVALUATION

SUPPLIER SOURCING AND TEXTURE INFORMATION		PRE-TEXTURE EVALUATION	AUTHORIZED CUSTOMER REPRESENTATIVE SIGNATURE AND DATE
		CORRECT AND PROCEED	
		CORRECT AND RESUBMIT	
		APPROVED TO TEXTURE	

COLOUR EVALUATION

COLOUR SUFFIX	TRISTIMULUS DATA					MASTER NUMBER	MASTER DATE	MATERIAL TYPE	MATERIAL SOURCE	HUE				VALUE		CHROMA		GLOSS		COLOUR SHPNG SUFIX	PART DISPOSITION
	DL*	Da*	Db*	DE	CMC					RED	YEL	GRN	BLU	LIGHT	DARK	GRAY	CLEAN	HIGH	LOW		

COMMENTS

SUPPLIER SIGNATURE	PHONE NO.	DATE	CUSTOMER REPRESENTATIVE SIGNATURE	DATE

CFG-1002 ☐ CUSTOMER USE ONLY **A4-A-6024**

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4. CFG 1003 Dimensional Report

Production Part Approval - Dimensional Results

Page _____ of _____ pages

ORGANIZATION SUPPLIER/VENDOR CODE:	PART NUMBER: PART NAME:
INSPECTION FACILITY	DESIGN RECORD CHANGE LEVEL: ENGINEERING CHANGE DOCUMENTS:

ITEM	DIMENSION/SPECIFICATION	SPECIFICATION/LIMITS	TEST FREQ.	QTY. TESTED	ORGANIZATION MEASUREMENT RESULTS (DATA)	OK	NOT OK

March 2006 CFG - 1003

Blanket statements of conformance are unacceptable for any test results

SIGNATURE	TITLE	DATE

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5. CFG 1004 Material Test Records

DaimlerChrysler Ford GM

Production Part Approval - Material Test Results

Page _____ of _____ pages

ORGANIZATION SUPPLIER/VENDOR CODE:	PART NUMBER: PART NAME:
MATERIAL SUPPLIER: *CUSTOMER SPECIFIED SUPPLIER /VENDOR CODE: *If source approval is req'd, include the Supplier (Source) & Customer assigned code.	DESIGN RECORD CHANGE LEVEL: ENGINEERING CHANGE DOCUMENTS: NAME of LABORATORY:

MATERIAL SPEC. NO. / REV / DATE	SPECIFICATION/LIMITS	TEST FREQ.	QTY. TESTED	ORGANIZATION MEASUREMENT RESULTS (DATA)	OK	NOT OK

March 2006 CFG - 1004

Blanket statements of conformance are unacceptable for any test results

SIGNATURE	TITLE	DATE

6. CFG 1005 Performance Test Record

DaimlerChrysler Ford GM

Production Part Approval - Performance Test Results

Page _____ of _____ pages

ORGANIZATION SUPPLIER/VENDOR CODE:	PART NUMBER: PART NAME:
NAME OF LABORATORY: *CUSTOMER SPECIFIED SUPPLIER /VENDOR CODE: *If source approval is req'd, include the Supplier (Source) & Customer assigned code.	DESIGN RECORD CHANGE LEVEL: ENGINEERING CHANGE DOCUMENTS:

MATERIAL SPEC. NO. / REV / DATE	SPECIFICATION/LIMITS	TEST FREQ.	QTY. TESTED	ORGANIZATION MEASUREMENT RESULTS (DATA)	OK	NOT OK

March
2006

CFG - 1005

Blanket statements of conformance are unacceptable for any test results

SIGNATURE	TITLE	DATE

POTENTIAL
FAILURE MODE AND EFFECTS ANALYSIS
(PROCESS FMEA)

FMEA Number ____________________

Page _____ of _____

Item ____________________ Process Responsibility ____________________ Prepared By ____________________

Model Year(s)/Vehicle(s) ____________________ Key Date ____________________ FMEA Date (Orig) ___________ (Rev) _________

Core Team ____________________

Process Function / Requirements	Potential Failure Mode	Potential Effect(s) of Failure	Sev	Class	Potential Cause(s)/Mechanism(s) of Failure	Occur	Current Process Controls	Detec	RPN	Recommended Action(s)	Responsibility & Target Completion Date	Action Results				
												Actions Taken	Sev	Occ	Det	RPN

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Gage R & R Study Worksheet

Date:

Gage Number:		Part Number:	
Gage Cert. Level:		Part Name:	
Gage Cert. Date:		Characteristic:	
Gage Build Source:		Engineering Level:	

Operator: A   B   C

No Operators:		Tolerance:	1
Number of Trials:	3	Number of Parts:	10

Operator	Number	1	2	3	4	5	6	7	8	9	10		Average
A	1												
	2												
	3												
	Average											X-bar	
	Range											R-bar	

Operator	Number	1	2	3	4	5	6	7	8	9	10		Average
B	1												
	2												
	3												
	Average											X-bar	
	Range											R-bar	

Operator	Number	1	2	3	4	5	6	7	8	9	10		Average
C	1												
	2												
	3												
	Average											X-bar	
	Range											R-bar	

	Part Average											Rp	

		R & R			%EV	#VALUE!	%EV-TV		R-Bar	
Equipment Variation:		Part Var:			%AV	#VALUE!	%AV-TV		X-Dif	
Appraiser Variation:		Total Var:			%RR	#VALUE!	%RR-TV		UCLr	
$S_{repeatability}$		$S_{R\&R}$		Notes			%PV-TV		LCLr	0.00
$S_{reproducibility}$		S_{TV}			ndc	#VALUE!	Min %RR		Max Range	
		Criteria <	**30%**			Pass/Fail			Stable?	

9. SOC Declaration

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環境負荷物質分析シート（Substance of Environmental Concern Analysis）

新規材料の購入仕様書に添付　（Attached in Purchasing Specifications of New Materials ）

矢崎購入仕様書管理№　：　ＹＰＥＳ－２５ (Yazaki Purchasing Specification Control No.)

（＊新設時はブランクで、改訂時から記入のこと）(＊Blank when registering. Enter when revising.)

商　品　名　： **Component number and name :**
提出日：　20　　年　　月　　日 Submission date : Year / Month / Date 会　　社　　名： Company name 部　　署　　名： Division name
Comments

＜環境負荷物質対応＞ <Action for Substance of Environmental Concern>

1 下記に示す指令、規制を遵守する事。 Be sure to comply with the following instructions and regulations.
YOS-C21-010「化学物質管理基準（禁止物質リスト）」
YOS-C21-010「Standard that controls chemical substance(prohibited substance list)」

2 下表№1～4の物質については分析値（測定値）とその測定方法を記入し、その分析報告書を添付する
Fill the analysis value (measuring value) and the measuring method for the substance No.1～4 in the following chart and attach the analysis report.

3 下表5～7の物質については含有率(カタログ値、設計値で可）を記入する。ただし意図的含有の場合に限り分析値も記入する。
Fill the content (Catalog value, design value are acceptable) for the substance No.5, 6 in the following chart.
However, fill analysis value in addition to the content only for intentional impurities.

No.	物質群 SUBSTANCE GROUP	物質名 SUBSTANCE NAME	許容含有率 Permissible Content	意図的含有の有無 （理由 Reason）	含有率 Content (ｶﾀﾛｸﾞ値等 Catalog value, etc.)	分析値 Analysis value	分析方法 Analysis method	測定機の下限値 MIN value of measuring machine
1	鉛及びその化合物 LEAD AND ALL LEAD COMPOUNDS	詳細は、EU指令2000/53/ECに基づく FOR DETAILS,IT IS BASED ON 2000/53/EC OF EU INSTRUCTIONS.	1000ppm	(				
2	水銀及びその化合物 MERCURY AND ALL MERCURY COMPOUNDS		1000ppm	(				
3	ｶﾄﾞﾐｳﾑ及びその化合物 CADMIUM AND ALL CADMIUM COMPOUNDS		100ppm	(				
4	６価クロム化合物 CHROMIUM(VI) COMPOUNDS		1000ppm	(				
5	特定臭素系難燃剤　SPECIFIC BROMINE FIRE RETARDANT MATERIAL （ﾃﾄﾗﾌﾞﾛﾓﾋﾞﾌｪﾆｰﾙ(CAS№40088-45-7),ﾍｷｻﾌﾞﾛﾓﾋﾞﾌｪﾆｰﾙ(CAS№36355-01-8), ﾍﾟﾝﾀﾌﾞﾛﾓｼﾞﾌｪﾆﾙｴｰﾃﾙ(CAS№32534-81-9),ｵｸﾀﾌﾞﾛﾓｼﾞﾌｪﾆﾙｴｰﾃﾙ(CAS№32536-52-0) TETRABROMOMINATED BIPHENYLS, HEXABROMINATED BIPHENYLS, PENTABROMINATED DIPHENYL ETHERS, OCTABROMINATED DIPHENYL ETHERS）		1000ppm	( )				
6				( )				
7				( )				
				( )				
				( )				

（2005.12.21）　雛型 Model （材料開発センターAMR&DC）