Supplier Quality Assurance Manual Appendices

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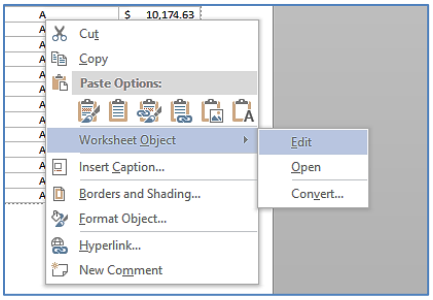
Important Notice:
Many of the forms in this Appendix are embedded Microsoft Excel documents. Right click on the place holder image, click “Worksheet Object” > Edit / Open / Convert the file.



Appendix 1: Mutual Non-Disclosure Agreement

This Mutual Non-Disclosure Agreement (the "MNDA"), dated as of _____(the "Effective Date") is made by and between TRANSMISIONES Y EQUIPOS MECÁNCOS, S.A. de C.V., acting through its Belgian branch ("TREMEC"), and _____("SUPPLIER").

1. Each of the parties to this Agreement intends to disclose information (the Confidential Information) to the other party for the purpose of design, development, manufacture and supply of automotive and related equipment by SUPPLIER to TREMEC (the Purpose).

2. Each party to this MNDA is referred to as 'the Recipient' when it receives or uses the Confidential Information disclosed by the other party.

3. For purposes of this MNDA, "Confidential Information" shall include any and all written or oral information or material of any kind, including, without limitation, information of a business, planning, marketing or technical nature and all models, tools, hardware, software, plans, specifications, designs, reports, memoranda, notes and other documents or analysis that contain, summarize or are based upon information provided to the Recipient. The fact of any discussions (and the context of the discussions themselves) between the Parties, the Purpose, and this MNDA shall also be considered Confidential Information subject to the provisions of this MNDA.

4. The Recipient undertakes not to use the Confidential Information disclosed by the other party for any purpose except the Purpose, without first obtaining the written agreement of the other party.

5. The Recipient shall not reverse engineer, disassemble, decompile, rent, lease or encumber, recreate, modify, enhance the properties of any samples provided. These Samples shall remain the property of the party providing the same, and shall be returned to that party immediately upon request. The Recipient shall, immediately upon request of disclosing party, return to and/or destroy, at the disclosing party´s sole discretion, any and all records, notes, and other written, printed, or tangible materials in its possession pertaining to the Confidential Information. If the disclosing party requested the destruction of any Confidential Information in the possession of the Recipient, the latter shall confirm such destruction in writing, expressly declaring its will to be bound by this declaration.

6. The Recipient undertakes to keep the Confidential Information disclosed by the other party secure and not to disclose it to any third party except to its employees and professional advisers with a need to know the Purpose, provided they shall be bound by obligations equivalent to those in this MNDA.

7. The confidentiality and non-disclosure obligations shall not apply to:
    a. any information which is or in future comes into the public domain (unless as a result of the breach of this MNDA); or
    b. any information which is already known to the Recipient as evidenced by written documentation in the files of the Recipient and which was not subject to any obligation of confidence before it was disclosed to the Recipient by the other party.

8. Nothing in this MNDA will prevent the Recipient from making any disclosure of the Confidential Information required by law or by any competent authority, provided that the Recipient shall notify the disclosing party promptly, so the disclosing party can take the appropriate measures to prevent and/or limit the extent of such disclosure, as permitted under applicable law.

9. The Recipient will, on request from the other party, return all copies and records of the Confidential Information disclosed by the other party to the Recipient and will not retain any copies or records of the Confidential Information disclosed by the other party.

10. Neither this MNDA nor the supply of any information grants the Recipient any license, interest or right in respect of any intellectual property rights of the other party except the right to use the Confidential Information disclosed by the other party solely for the Purpose. The parties agree that as, if as a result from the performance of this MNDA and/or any other agreement entered between the parties, a technology development or any kind of intellectual property is developed, created or enhanced, all the rights resulting from any such development or Industrial property right, shall be exclusive property of TREMEC and considered as work made for hire. Therefore, nothing in this MNDA shall be construed as granting the other Party a license or any collaboration between the parties, neither by implication, estoppel or otherwise. In addition, the developer for hire shall not register any of the IP developed and accepts to execute all the assignments needed in order that TREMEC can register all the rights of such IP.

11. The parties acknowledge that remedies at law may be inadequate to protect the Disclosing Party against the breach of this MNDA and in advance, agree to the granting of injunctive relief in the Disclosing Party's favor without proof of actual damages. Such relief shall not be deemed to be the exclusive relief for a breach of this MNDA, but shall be in addition to all other remedies available al law.

12. The provisions of this MNDA shall continue in force for 5 (five) years from the date of this MNDA and shall survive the termination of any relationship between the parties, for a period of 5 (five) years thereafter.

13. No failure or delay by any of the parties in exercising any right, power or privilege under this MNDA, shall operate as a waiver hereof, nor any single or partial exercise thereof, preclude any other or further exercise of any right, power or privilege.

14. This MNDA is governed by, and is to be construed in accordance with, Belgian Law, except its conflict of law provisions. The Parties agree that the Dutch-speaking Courts of Brussels, Belgium, are exclusively competent for all disputes arising in connection with this MNDA

Each party has signed this MNDA through its authorized representative.

Authorized to sign for TREMEC	Authorized to sign for SUPPLIER
Authorized signature:	Authorized signature:
_____	_____
Company stamp:	Company stamp:
_____	_____
Approval date:	Approval date:
_____	_____

Appendix 2: Supplier Profile/Self-Assessment Questionnaire

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file.

Supplier General Profile - Self-Assessment Questionnaire - v1 8.5.2018

Notes on use of this document: This document is used in the evaluation of potential suppliers and is part of the supplier approval process. This form should be returned to the Tremec Buyer or person who issued it.
Further evaluation may be required using the 'Tremec Supplier's Quality Assessment for New Suppliers' form.

Name of Supplier _____
Address _____
Phone _____

	Name	Position	Email
Main contact			
Sales Manager			
Quality Manager			
Engineering Manager			
Accounts Manager			

What is your preferred business language? _____

1a. Main products and processes:

_____
_____
_____

1b. What are your main capabilities?

Manufacture to drawing	☐	Prototype production	☐
Design and manufacture	☐	Serial production	☐
Original Equipment Manufacturer	☐		
Distributor	☐		

2. Main customers

_____

3. Memberships and Approvals		Details of accreditation
IATF TS16949 2016	☐	_____
ISO9001:2015	☐	_____
ISO 14001 2015	☐	_____

4. Systems		Details
Do you follow APQP principles?	☐	_____
Do you have access to APQP reference manuals?	☐	_____

		Details
Can you perform Design Failure Mode and Effects Analysis?	☐	_____
Can you perform Process Failure Mode and Effects Analysis?	☐	_____
Can you produce Control Plans?	☐	_____
Can you provide PPAP? Provide details of levels	☐	_____
Do you use Statistical Process Control methods?	☐	_____
Do you use Measurement System Analysis?	☐	_____
Do you have a system of tracing materials?	☐	_____
Do you have a system of tracing finished product?	☐	_____
What ERP system do you use?	☐	_____
What CAD software do you use?	☐	_____

5.General background and financial

What was your sales turnover for your last financial year? _____
How many employees do you have? Technical / office _____ Shopfloor _____
Do you carry Product Liability Insurance and the level of cover? _____
Is your company part of a larger group? _____

6. Tremec will require acceptance of their Supplier Quality Assurance Manual and Purchase Terms and Conditions

Complete by: Position Date

Appendix 3: Quality System Assessment for New Suppliers

Right-click to open/edit the embedded Microsoft Excel document Note: this is a multi-page document

TREMEC SUPPLIER'S QUALITY SYSTEM ASSESSMENT FOR NEW SUPPLIERS

Name of the Supplier:
Location:
Type of product:
Commodity:
Done by:

Date of Opening:
Date of Revision:
Date of Closing:

SDE/TREMEC:
Tel # of SDE/TREMEC:
E-MAIL of SDE/TREMEC:
TREMEC Plant:

Pts	*Evaluation Criteria*	Pts	*Evaluation Criteria*
0	*Element is not in place and there is no evidence of implementation plans*	*3*	*Element is in place and it has tracking instability*
1	*Element is not in place but there is a documented plan for implementation*	*4*	*Element is in place and there is evidence of tracking*
2	*Element is in place but it is not followed up*	*NA*	*Element is not applicable for supplier kind of bussines (for example: distrubuitorrs, brokers and others)*

SUPPLIER SELF-ASSESSMENT

TREMEC ASSESSMENT

A. General Management		Score	G/ Y/R	Looking for….	Comments of accomplishing to the requirement
A.1	Do you have a documented personal training program and it is related to the ability evaluation of the employee/worker according to the job descrition?		R	**FOR TRAINING:** '- Evidence of a graduating step approach such as the 4 Step (Job Instruction Training) process and are provided the opportunity to practice the new skill or know ledge. '- Prepare, Demonstrate, Try-out performance, Follow-Up. '- Documentation to show who is certified to train. '- Ask operators how they are trained. '- Training record that documents training of procedures and overall job know ledge to: '- Work safely (guards, start-up shut dow n, lock out) '- Perform proper record keeping (production/quality) '- Understand w ork place organization responsibility '- Quality requirements (containment, red-bins, andon, etc) '- Records are available and easily retrieved. '- Individual Job training record w ith dates and trainer signoff for each job. '- Record indicates the steps in training & skill/know ledge level achieved for each job: '- Follow-up includes the trainer audits employee to standard w ork instructions, verifies quality & productivity w ithin shift and again approximately one day later. '- Verify a new operator is follow ing Standardized Work Instructions & know the quality and productivity requirements. '- Operator Tracking Sheets or equivalent posted at all operations or w ork area. '- All operators listed including supplemental employees. '- Review training dates and tracking sheet revision dates. **BEST PRACTICES:** '- Chart show ing cross training/certification level in a cell such as a flexibility chart. '- Look for a job rotation plan or log. How often does team rotate? '- The number of Team Members certified per station should support the Job Rotation Plan. '- If it does not, look for a plan such as a Flexibility Chart 2x2 or 4x4 matrix, that show s the status, actual vs planned number certified per station that is being used to maintain job rotation.	
A.2	Does the supplier use the G8D's methodology for problem solving for every customer complaint?		R		
A.3	Do you apply one or more of the following techniques for the root cause analysis: Cause-Effect Diagram, 5 Why's, DD&W (Drill, Deep & Wide), etc.?		R		
A.4	Is there a documented procedure to implement and manage the learned lessons to similar processes /products?		R		
A.5	Do you have a specific department or people in charge assigned for the APQP of new products?		R		
A.6	Is your site certified regarding the Quality Systems by third parties? Please indicate with an **"X" the type of accreditation** (** Attach an updated copy of the accreditations at latest revision by third parties)* ISO-9001?* ISO/TS-16949?* ISO-14001?*		R		
A.7	Does your procedure indicate the communication with your customer when the "certification of the quality system was lost or has expired?		R		
A.8	Do you use the bar code ID for purchased materials and those materials shipped by your site to the customer?		R		
A.9	Do plant managers make frequent tours to the Workstations?		R		
A.10	Are there performance indicators of the production lines/work stations checked on a daily basis, where it is check among others, the customer's feedback (PPM's, DMR's, line shutdowns, % of on time deliveries, etc.) and internal metrics as Safety, Productivity, FTQ, Line shutdowns, Scrap, etc.		R		

Appendix 4: Quality System Assessment Results

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

TREMEC

TREMEC'S SUPPLIERS QUALITY SYSTEM ASSESSMENT

Supplier: 0
Location: 0

Date Opening: 0
Date of Revision: 0
SDE/Auditor's Team: 0

Supplier Review

A. General Management

0	Training			
0	G8D's Methodology			
0	Root Cause Analysis			
0	Learned Lessons System			
0	APQP for New Products			
0	Quality System Certification			
0	Quality System Certification Management			
0	ID Bar Code Identification System			
0	High Direction Management			
0	Floor Management			
0	**Total**	**Potential:**	**40**	**0.0%**

B. Customer Drawings & Specifications Control

0	Revision of Customer Designs & Specifiactions			
0	Control of Latest Engineering Level of Customer Designs & Spec's			
0	Procedure of Document & Data Control			
0	Records Retention Procedure			
0	**Total**	**Potential:**	**16**	**0.0%**

C. Managing Risk/PFMEAs & Risk Reduction - Annual Review/Bypass - Deviation Management (Ref. BIQS-3, BIQS-4 & BIQS-5)

0	PFMEA Multidisciplinary Risk Assessement			
0	PFMEA Failure Modes Definition			
0	PFMEA Periodical Risk Assessment			
0	Reverse PFMEA			
0	Error Proofing Bypassed Definition			
0	RPN for Bypassed Devices			
0	Standardized Work for Bypasses Devices			
0	Bypassed Devices Tracking			
0	Bypassed Devices/LPA's			
0	Revalidation of reintegration of Bypassed Devices to Operation			
0	**Total**	**Potential:**	**40**	**0.0%**

D. Nonconfoming Material Control / Material Identification (Ref. BIQS-1)

0	Standardized Handling of Nonconforming Material			
0	Appropriate Nonconforming Material Handling			
0	Identification of Nonconforming Material			
0	Containment Actions of Nonconforming Material Cleaning Up			
0	Traceability Methods			
0	Nonconforming Material Analysis			
0	Nonconforming Material Corrective Actions			
0	Nonconforming Material Handling Procedure			
0	Quarantine Areas Definition for Nonconfoming Material Segregation			
0	Rework/Sorting Instructions Process			
0	**Total**	**Potential:**	**40**	**0.0%**

E. Error Proofing (Ref. BIQS-6)

0	Error Proofing Included in PFMEA			
0	Error Proofing Functionality Test			
0	Identification of Master Parts for Error Proofing Effectiveness Validation			
0	Using & Identification of "rabbit" parts			
0	**Total**	**Potential:**	**16**	**0.0%**

F. Control Test & Measurement Equipment (Ref. BIQS-7)

0	Procedure of Calibration of Test & Measurement Equipment			
0	Identification & Codification of Test & Measurement Equipment			
0	Qualification of Masters conforming International Standards			
0	MSA Studies Application to Test & Measurement Equipment			
0	Measurement System Analysis aligned with AIAG/MSA Last Revision			
0	**Total**	**Potential:**	**20**	**0.0%**

G. Fast Response Problem Solving Process (Ref. BIQS-8)

0	Criteria for Fast Response Process			
0	Involving of Plant Manager in Fast Response Process			
0	Involving of Plant Staff in Fast Response Process			
0	Documentation Evidence in Fast Response Tracking			
0	Exit Criteria of Fast Response Process			
0	Read Across as part of Fast Response Process			
0	Standardized Fast Response Process along Organization			
0	Robust Root Cause Analysis			
0	Fast Response Process Management			
0	High Risk Issues Customer Notification as part of Fast Response			
0	**Total**	**Potential:**	**40**	**0.0%**

H. Production Capacity and Metrics

0	Existency of Availbale Capacity for New Business			
0	"Down Times" Analysis and Corrective Actions			
0	Delivery Assessment to Customer Criteria			
0	Existency of Run @ Rates Excersises to demonstrate enough Capacity			
0	Existency and Management of Customer Metrics Feedback			
0	**Total**	**Potential:**	**20**	**0.0%**

I. Layered Process Audits/LPA's (Ref. BIQS-2)

0	Existency of Layered Process Audits Criteria			
0	Layered Process Audits Escalation			
0	Layered Process Audits Plan Tracking			
0	Inclusion of Customer Feedback High Risk Issues in LPA's			
0	Layered Process Audits Follow Up			
0	**Total**	**Potential:**	**20**	**0.0%**

J. Standardized Work (Ref. BIQS-11)

0	Standarization of Processes & Formats and all related documents			
0	**Total**	**Potential:**	**4**	**0.0%**

K. Finished Product Verification (Final Inspection/CARE/GP-12) (Ref. BIQS-13)

0	Final Inspection/GP-12 Implementation			
0	Definition of Final Inspection/GP-12 Criteria and Application			
0	Final Inspection/GP-12 Deployment as Standardized Work			
0	Final Inspection/GP-12 Methods Definition			
0	Final Inspection/GP-12 Records			
0	**Total**	**Potential:**	**20**	**0.0%**

L. Materials Flow Management (Ref. BIQS-27 & BIQS-28)

0	Storage & Identification of Materials			
0	FIFO Process			
0	WIP Containers/Materials Damage Protection			
0	Materials Packaging for Shipment to Customer			
0	"Zero Stock Policy"/One Piece Flow			
0	**Total**	**Potential:**	**20**	**0.0%**

M. Statistic Process Control (Ref. BIQS-21)

0	SPC Training Program			
0	SPC Application for Special Characteristics			
0	SPC Implementation & Monitoring Responsibility			
0	Process Capability Indexes Meet Customer Requirements			
0	Improvent Plans for Low Process Capabilities			
0	100% Inpection for Low Process Capabilities for Customer Protection			
0	**Total**	**Potential:**	**24**	**0.0%**

N. Process Control (Ref. BIQS-19)

0	ISR Approval			
0	Product & Process Audit during Production Running			
0	Material Identification through Process Flow			
0	Process & Quality Documents for Operator using			
0	**Total**	**Potential:**	**16**	**0.0%**

O. Workstations Organization/5S's

0	Tool & Material Required in Operation			
0	Tool & Material Properly Identified & Storaged in Operation			
0	Cleanliness Culture in Workstation and along the organization			
0	5 S's Audits as Regular Process			
0	**Total**	**Potential:**	**16**	**0.0%**

P. Machinery & Tooling (Ref. BIQS-26)

0	TPM in Machinery & Tooling			
0	Material Replacement Stock for Critical Machines & Tooling			
0	Tool & Tooling Wearing Out Control			
0	Product Features Process Capability Control in Critical Machines			
0	**Total**	**Potential:**	**16**	**0.0%**

Q. Tiered Suppliers Management (Ref. BIQS-29)

0	List of Approved Suppliers			
0	Supplier Performance Evaluation in a Periodical Base			
0	Suppliers Quality System Audits Tracking			
0	Quality Data for Sourcing Decision			
0	SPC Requirement to Suppliers			
0	Accomplishing with CQI-9, CQI-11 & CQI-12			
0	Suppliers Material Certificates Requirement by Shipment			
0	PPAP Requirements with Suppliers			
0	Supplier Materials Incoming Inspection			
0	Suppliers Non Conforming Material Control			
0	Suppliers Materials Traceability			
0	**Total**	**Potential:**	**44**	**0.0%**

R. Managing Change (Ref. BIQS-12)

0	Validation of Plant Processes			
0	Process Change Control			
0	PFMEA & Control Plan Updating			
0	Process Change to Customer Notification			
0	**Total**	**Potential:**	**16**	**0.0%**

S. Deviations/Concessions

0	Procedures to Manage Deviations/Concessions to Customer			
0	Deviations/Concessions Customer Approval			
0	Shipping Material Control under Deviation/Concession			
0	**Total**	**Potential:**	**12**	**0.0%**

SUMMARY BY ELEMENT

	RED	YELLOW	GREEN	TOTAL
A.-	10	0	0	10
B.-	4	0	0	4
C.-	10	0	0	10
D.-	10	0	0	10
E.-	4	0	0	4
F.-	5	0	0	5
G.-	10	0	0	10
H.-	5	0	0	5
I.-	5	0	0	5
J.-	1	0	0	1
K.-	5	0	0	5
L.-	5	0	0	5
M.-	6	0	0	6
N.-	4	0	0	4
O.-	4	0	0	4
P.-	4	0	0	4
Q.-	11	0	0	11
R.-	4	0	0	4
S.-	3	0	0	3

%	Pts	Element	Status
0.0%	0	A. General Management	RED
0.0%	0	B. Customer Drawings & Specification Control	RED
0.0%	0	C. Managing Risk/PFMEA's & Risk Reduction	RED
0.0%	0	D. Non Conforming Material Control	RED
0.0%	0	E. Error Proofing	RED
0.0%	0	F. Control Test & Measurement Equipment	RED
0.0%	0	G. Fast Response Problem Solving Process	RED
0.0%	0	H. Production Capacity Metrics	RED
0.0%	0	I. Layered Process Audits	RED
0.0%	0	J. Standardized Work	RED
0.0%	0	K. Finished Product Verification	RED
0.0%	0	L. Material Flow Management	RED
0.0%	0	M. Statistics Process Control	RED
0.0%	0	N. Process Control	RED
0.0%	0	O. Workstation Organization	RED
0.0%	0	P. Machinery & Tooling	RED
0.0%	0	Q. Tiered Suppliers Management	RED
0.0%	0	R. Managing Change	RED
0.0%	0	S. Deviations/Concessions	RED
0.0%	**0**	**GLOBAL RATE**	**RED**

*** ALL "RED" ELEMENTS AND GLOBAL RATE LESS THAN 80% MUST HAVE AN ACTION PLAN TO MEET WITH THE TREMEC REQUIREMENTS**

FINAL SCORE CRITERIA:

≥80%, ≤100%	GREEN
≤60%, <80%	YELLOW
<60%	RED

FINAL SUPPLIER STATUS:

REJECTED SUPPLIER

Appendix 5: Action Plan & Follow-Up/Quality System Assessment

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

ACTION PLAN & FOLLOW UP/QUALITY SYSTEM ASSESSMENT

Date of Opening:	
Date of Revision:	
Date of Closing:	

Name of the Supplier:		SDE/TREMEC:	
Location:		Tel # of SDE/TREMEC:	
Type of product:		E-MAIL of SDE/TREMEC:	
Commodity:		TREMEC Plant:	
Done by:			

"Color Code": **Green** - Task finished on time; **Yellow** - Task may be delayed; **Red** - Task is delayed; White - Task rescheduled. No follow-up; **Blue** - Task is on time

	Deviation to the Requirement	Actions to meet with the Requirement	Lider Of Action	Initial Date	Estimated Completion Date
A. General Management					
A.1	0				
A.2	0				
A.3	0				
A.4	0				
A.5	0				
A.6	0				
A.7	0				
A.8	0				
A.9	0				
A.10	0				
B. Drawings and Specifications Control					

Appendix 6: Supplier Manufacturing Feasibility Analysis (1a)

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

Part number:
Part Description:
Transmission Model:

Consecutive Item of drawing lay out	Characteristics Specification	Type of Characteristics					Preliminary Capability Requirement - Short Term		100% Inspection during 90 days after PPAP submission is		Long Term Process Capability Requirement		Control Method in Pre-Production Control Plan	Control Method in Production Control Plan	Special Instructions
		CC	SC KCC MCC	DR	PTC	STD (no symbol)	Pp	PPk	Yes	No	Cp	CPk			
				x			15	133			15	133		SPC (X-R chart) <<Inspection frequency in Control Plan (Depending on the process capability of Data Collection during 90 days)>>	1) 100% inspection by variable gage or CMM during 90 days after PPAP submission. 2.Match the physical part with the CMM inspection report and send the reports in every shipment for each single piece (send by e-mail and/or attach a hard copy in the shipment). 3) With the complete data of the 100% inspections during 90 days must be used to calculate the real Cp and Cpk and the required values must be reached, if not, then a 100% inspection must be documented in Production Control Plan until process capabilities meet the requirements. 4) Send copy of last X-R chart issued in the end of each quarter of the year with calculation of the Cp and Cpk value. 5) Dimension & Material results of these features must be considered as part of the Certificate of Compliance attached in every shipment. This requirement is forever during the life of the part under TREMEC Release. (Production Control plan inspection frequencies must be in agreed upon with TREMEC SDE).
				x			15	133			15	133			
				x			15	133			15	133			
				x			15	133			15	133			
				x			15	133			15	133			
				x			15	133			15	133			
			x				2	167			167	133			
			x				2	167			167	133			
			x				2	167			167	133			
						x	133	1	x		133	1	100%	<<Inspection frequency in Control Plan (Depending on the process capability of Data Collection during 90 days>>	6. Apply the same requirements 1,2,3,5 above
						x	133	1			133	1			
						x	133	1			133	1			
						x	133	1			133	1			
						x	133	1			133	1			
						x	133	1			133	1			
		x					2	167			2	167		Error proofing type 1or 2 SPC X-R chart 100% inspection in production	7. Apply the same requirements 1,2,3,4,5 above
		x					2	167			2	167			
					x		2	167			167	133		Error proofing type 1or 2 or 100% inspection using Gage in Process or by Attributes (Chart nP)	8. Apply the same requirements 1,2,3,5 above and 9. Send copy of last nP chart issued in the end of each Qtr of the year with calculation of rejection rate.

*Note: add lay out drawing

CC = Critical Characteristic = Cp≥2.5, Cpk≥2.0, SPC (X-R Chart)

SC = Significant Characteristic = Cp≥2,0, Cpk≥167, SPC (X-R Chart)

DR = Standard Characteristic = Cp≥15, Cpk≥133, SPC (X-R Chart)

PTC= Pass Thru Characteristic = 100% Inspection and Error Proofing Required

Appendix 7: Supplier Manufacturing Feasibility Analysis (1b)

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

Manufacturing Feasibility 1(b)

Yellow to be completed by Tremec

Drawing requirements							Requirements understanding	Requirements feasibility							Action plan tracking							
Drawing specification	Type of characteristics				Is the requirement clear and understood?		If the Requirement was not understood what is needed to be clarified?	Is the requirement attainable?				If the Requirement is not attainable, describe what is the concern?	Action needed	Responsible	Does the Action require design change?		Design change accepted		Why?	Final Status		Special instruction(s) after PO allocation
	CC	SC / KCC / MCC	DR	PTC	Yes	No		Yes			No				Yes	No	Yes	No		Open (red)	Closed (green)	
								Operation #	Type of machine	Type of inspection												

Appendix 8: Engineering Drawing Symbols

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

Symbol	Special characteristics
AQC	Attribute Quality Characteristic (AQC)
PTC	Pass Through Characteristic (PTC)
CC	Critical Characteristic (CC)
SC	Significant Characteristic (SC)
CSI	Critical Safety Item (CSI)
SPC	Statistical Process Control (SPC)
KPC	Key Product Characterist (KPC)
DR	Standard Characteristic with documentation required (DR)
P	
P	

Appendix 9: Entry Controlled Shipment Level 1

To:
Add the name of your contact person within supplier's organization
Add supplier name location

Entry Controlled Shipment Level 1

Ref:
Date:

Dear Valued Supplier,
Controlled Shipping is part of TREMEC's Supplier Quality Assurance and is part of the Supplier Quality Improvement Process. TREMEC has determined that current controls by your organization are **not sufficient** to insulate TREMEC's plant add the location of plant from the receipt of nonconforming parts produced by your facility.
This letter is formal notification and confirms discussions held with you that add supplier name and manuf location has been placed in **Controlled Shipping Level 1** for the non-conformances detailed:

Supplier & Plant Location(s):	Supplier Name / location
Supplier Plant Code:	Supplier Code if applicable
Supplier contact / Contact details:	Contact Name / Contact Email / Contact Telephone No.
Non-conformances *:	Add Non Conformance No.
8D:	Add 8D Identification No.
Affected Part Number(s) *:	Add the Tremec Part No.(s)
Affected Part Name(s):	Add the description of the part(s) affected by quality issue
Affected Tremec receiving plant(s)*:	Add the location of All affected Tremec Plants
Affected Tremec Project:	Add name of the Project
Intended Start Date:	dd-mmm-yy
Intended Finish Date:	dd-mmm-yy

*This Controlled Shipping process may be extended on ALL similar part numbers or similar manufacturing processes for these listed non-conformances for ALL possibly affected TREMEC products at the discretion of the TREMEC SQE management.

If you have any questions please contact TREMEC's Global Supplier Quality Assurance Manager, who will be monitoring and defining controlled shipping activities. The procedures you have enacted to date have been insufficient in stopping the flow of non-conforming material to our plant. **Therefore, you must immediately:**

1. Develop, define and implement an agreed-upon containment activity over and above your current process controls and containment activity as per TREMEC SQAM para 4.7.3
2. Clearly identify the qualified shipments as per TREMEC SQAM para 4.7.3.2
3. Meet the defined exit criteria.

Note: Failure to comply with this process, or the inability to implement a successful action plan or containment activity, will result in the implementation of Controlled Shipping 2 and/or New Business On Hold.

Supplier Responsibilities during Controlled Shipping 1:

- Provide a list of similar part numbers affected by the Controlled Shipping action to TREMEC SQE Engineer – add the name of the relevant SQE Engineer/location
- Contain all non-conforming parts at the supplier, warehouses, in transit and at any TREMEC locations immediately upon notification of Controlled Shipping status.
- Provide an additional inspection for the defect(s) noted in an inspection area which is separated from the normal production area. (The inspection area may be located within the normal production area if the TREMEC representatives approve the location based on material flow, possible damage from excessive handling or product design considerations).
- Implement irreversible, permanent corrective action in a timely manner, i.e. implement error proofing.
- Requalification for the parts is necessary
- Pay for all additional costs due to Controlled Shipping.
- The Supplier must comply with TREMECS SQAM para 4.7.3 Controlled Shipments Level I

Exit Criteria:

- Inspection data of the redundant outgoing inspection shows no rejects in the inspection area for a minimum of 30 days or 3 production lots after implementation of CSL 1.
- Implement error proofing as appropriate within your process for the defect(s) noted above.
- Evidence, that a thorough problem-solving process was used, the true root cause of the problem was discovered and the irreversible corrective actions were implemented and validated and the 8D completed.
- Statistical process control used when appropriate, to confirm a stable and capable process 30 days after implementation of irreversible corrective action.
- All documentation (Potential Failure Mode and Effects Analysis (PFMEA), Process Control Plan, Process Flow Diagram, Operator Work Instructions) is modified and PPAP submission executed, if required.
- The supplier will remain in CSL 1 status until written authorization to exit from CSL 1 is received from the TREMEC Management.

Sincerely,
Tremec
Site Supplier Quality Engineering Manager

Supplier Acknowledgment:

We Supplier Name & Location acknowledge receipt of this communication that we have been placed in Controlled Shipment Level 1

Contact Name	Contact Position	Contact Tel No.	Contact Email	Signature

Appendix 10: Entry Controlled Shipment Level 2

To:
Add the name of your contact person within supplier's organization
Add supplier name & location

Entry Controlled Shipment Level 2

Ref:
Date:

Dear Valued Supplier,
Controlled Shipping is part of TREMEC's Supplier Quality Assurance and is part of the Supplier Quality Improvement Process. TREMEC has determined that current controls by your organization for the **Controlled Shipments Level 1 have not** been sufficient to insulate TREMEC's plant add the location of plant from the receipt of nonconforming parts produced by your facility. Some of these reasons can be found in TREMEC's SQAM para 4.7.4.
This letter is formal notification and confirms discussions held with you that add supplier name and manuf location has been placed in **Controlled Shipping Level 2** for the non-conformances detailed:

Supplier & Plant Location(s):	Supplier Name / location
Supplier Plant Code:	Supplier Code if applicable
Supplier contact / Contact details:	Contact Name / Contact Email / Contact Telephone No.
Non-conformances *:	Add Non Conformance No.
8D:	Add 8D Identification No.
Affected Part Number(s) *:	Add the Tremec Part No.(s)
Affected Part Name(s):	Add the description of the part(s) affected by quality issue
Affected Tremec receiving plant(s)*:	Add the location of All affected Tremec Plants
Affected Tremec Project:	Add name of the Project
Intended Start Date:	dd-mmm-yy
Intended Finish Date:	dd-mmm-yy

*This Controlled Shipping process may be extended on ALL similar part numbers or similar manufacturing processes for these listed non-conformances for ALL possibly affected TREMEC products at the discretion of the TREMEC SQE management.

If you have any questions please contact TREMEC's Global Supplier Quality Assurance Manager, who will be monitoring and defining controlled shipping activities. The procedures you have enacted to date have been insufficient in stopping the flow of non-conforming material to our plant. **Therefore, you must immediately:**

4. Develop, define and implement an agreed-upon containment activity over and above your current process controls and containment activity as per TREMEC SQAM para 4.7.4
5. Clearly identify the qualified shipments as per TREMEC SQAM para 4.7.4.6
6. Meet the defined exit criteria.

Note: Failure to comply with this process, or the inability to implement a successful action plan or containment activity, will result in the implementation of New Business On Hold.

Supplier Responsibilities during Controlled Shipping 2:

- Provide a list of similar part numbers affected by the Controlled Shipping action to TREMEC SQE Engineer – add the name of the relevant SQE Engineer/location
- Contain all non-conforming parts at the supplier, warehouses, in transit and at any TREMEC locations immediately upon notification of Controlled Shipping status.
- Contract immediately with purchase order the services of the 3rd party provider company selected by TREMEC and provide a copy to add the name of TREMEC SQE Engineer.
- Provide an additional place for inspection for the 3rd party provider defined by TREMEC according to the Quality Agreement.
- Implement irreversible, permanent corrective action in a timely manner, i.e. implement error proofing.
- Requalification for the parts is necessary
- Pay for all additional costs due to Controlled Shipping.
- The Supplier must comply with TREMEC's SQAM para 4.7.4 Controlled Shipments Level 2

Exit Criteria:

- Inspection data of the redundant outgoing inspection of 3rd party provider shows no rejects in the inspection area for a minimum of 6 weeks after implementation of CSL 2. In case of failure found within 6 weeks' time frame at the CSL 2 activity, the CSL 2 will be restarted.
- Implement error proofing as appropriate within your process for the defect(s) noted above.
- Evidence, that a thorough problem-solving process was used, the true root cause of the problem was discovered and the irreversible corrective actions were implemented and validated and the 8D completed.
- Statistical process control used when appropriate, to confirm a stable and capable process 6 weeks after implementation of irreversible corrective action.
- All documentation (Potential Failure Mode and Effects Analysis (PFMEA), Process Control Plan, Process Flow Diagram, Operator Work Instructions) is modified and PPAP submission executed, if required.
- The supplier will remain in CSL 2 status until written authorization to exit from CSL 2 is received from the TREMEC Management.

Sincerely,
Tremec
Site Supplier Quality Engineering Manager

Supplier Acknowledgment:

We Supplier Name & Location acknowledge receipt of this communication that we have been placed in Controlled Shipment Level 2

Contact Name	Contact Position	Contact Tel No.	Contact Email	Signature

Appendix 11: Exit Controlled Shipment Level 2

To:
Add the name of your contact person within supplier's organization
Add supplier name & location

Exit of Controlled Shipment Level

Ref:
Date:

Dear add the name of your contact person,
After the fulfilment of the exit criteria, successful implementation of the corrective action and satisfactory performance on the below mention part numbers, we are glad to inform you, that TREMEC has released add supplier's name from the status of **Controlled Shipping Level 1 or 2** beginning from dd-mmm-yy.
We hope, the improvements add supplier's name implemented within the process have permanent positive influence on delivered quality of parts in the future.

Supplier & Plant Location(s):	Supplier Name / location
Supplier Plant Code:	Supplier Code if applicable
Supplier contact / Contact details:	Contact Name / Contact Email / Contact Telephone No.
Non-conformances *:	Add Non Conformance No.
8D:	Add 8D Identification No.
Affected Part Number(s) *:	Add the Tremec Part No.(s)
Affected Part Name(s):	Add the description of the part(s) affected by quality issue
Affected Tremec receiving plant(s)*:	Add the location of All affected Tremec Plants
Permitted END Date:	dd-mmm-yy

Sincerely,
Tremec
Site Supplier Quality Engineering Manager

Appendix 12: DMR / NCR Notification

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

TREMEC	NON-CONFORMING PRODUCT ANALYSIS	No.

PART NUMBER:	PART NAME:	CUSTOMER PART NUMBER:	QUANTITY OF LOTS:
AFFECTED MODEL:	CUSTOMER:	SUPPLIER:	CAVITY/ DIE:
QUANTITY OF PIECES SUPPORTED:	DATE WHEN CORRECT PIECES WILL BE:	INDICATE AFFECTED CHARACTERISTIC: FIT ☐ PEFORMANCE ☐	

NAME: APPLICANT/ RESPONSIBLE:	AREA:	SIGN:	EXT:	DATE:

MANAGER APPLICANT (PURCHASE PRODUCTION)	QUALITY MANAGER APPROVAL:

ITEM	DESIGN SPECIFICATION	CONDITION OF ANALYSIS
1		
2		
3		
4		
5		
6		

DISCREPANCY DESCRIPTION AND ROOT CAUSE THAT ORIGEN THIS ANALYSIS

CORRECTIVE ACTIONS	RESPONSIBLE	IMPLEMENTATION DATE:

ATTACH SUPPORT AND REPORT DOCUMENTS OF 8 DISCIPLINES ACCORDING TO CURRENT PROCESS

MATERIAL IDENTIFICATION:

Add a green point aside to the adapter assembled to the bomb set TUEM6707

SPECIAL INSTRUCTIONS: TEST REQUIRED: VEHICULAR: ☐ OTHER: ☐ _____

CUSTOMER APPROVAL: ☐
SERIAL NUMBER REPORT REQUIRED: ☐
REVALIDATION REQ: ☐

DATE AND RECEIVE HOUR
BY QUALITY CONTRIL ASSISTANT:

CURRENT MATERIAL DISPOSITION:

	STOCK	AFTERMARKET	ON PROCESS
USE:	☐	☐	☐
REWORK:	☐	☐	☐
SCRAP:	☐	☐	☐
NOT AFFECT:	☐	☐	☐

CORE TEAM DECISION:	APPROVED	REJECTED
QUALITY ENGINEER PURCHASE OR PROCESS:		
QUALITY ENGINEER CORE TEAM:		
PRODUCT ENGINEER CORE TEAM:		
DECISION OF:		
PRODUCT ENGINEER MANAGER:		

Appendix 13: First Production Run(s) After PPAP Approval

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

FIRST PRODUCTION RUNNINGS AFTER PPAP APPROVAL

Part no. _____ **Supplier** _____

(A) SHIPMENT: NUMBER OF DAYS AFTER PPAP APPROVAL:

☐ 1st Delivery after PPAP

☐ 2nd Delivery after PPAP

(B) REASON OF USING THIS KIND OF VISUAL AID:

☐ **DRAWING ENGINEERING CHANGE** **LATEST ENGINEERING LEVEL:**

☐ **NEW PART NUMBER**

☐ **NEW SUPPLIER FOR THIS PART NUMBER**

☐ **OTHER Please Explain the Reason:**

Appendix 14: Tool Tagging Worksheet

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

TREMEC

Tool Tagging Worksheet

Please use this worksheet to provide TREMEC with the information needed after obtain tooling numbers. Weights and measurements can be estimated. TREMEC will provide you with the information required as first step of this format. Supplier will take photos (close up of ID plate riveted added in tooling and open picture showing the complete tooling with riveted ID plate according to attached visual aid) of the die and/or, molds, and/or fixtures and/or tools with the ID information supplied by TREMEC and attach them to the PPAP documentation.

		Shaded area to be Completed By TREMEC SQDE or Designee:
1	Program/Project	
2	OE Customer Name (IF Cust Owned)	
3	OE Customer PO/Contract Number	
4	Customer Equipment Number*	
5	Supplier Name	
6	Supplier Contact Name	
7	Supplier Contact Phone	
8	Supplier Contact Email	
9	TREMEC PO Number	
10	TREMEC Assembly part number	
11	TREMEC Component Part Number*	
12	TREMEC Component Part Name*	

*** This information must be part of theTooling ID**

Put an X in the Category box	**Tool Category**			
Tool Type	**Die**	**Mold**	**Fixture**	**Machine Tool**
Progressive				
Extrusion				
Die Cast				
Trimming Die				
Line Die				
Injection				
Compression				
Vacuum				
Blow				
Other				
Checking				
Holding				
Machining				
Other (Please describe)				
Holding				
Cutting/machining				
Other: (Please describe type)				

Daily capacity- quantity	
Daily capacity - hours	
Tool manufacturer DUNs #	
Tool Manufacturer Country	
Tool location (street address)	
Length (in/mm)	
Heigth (in/mm)	
Width (in/mm)	
Weight (lbs./Kg)	
Tool material	

Appendix 15: Part Submission Warrant

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

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) KG

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

ORGANIZATION MANUFACTURING INFORMATION

Organization Name & Supplier/Vendor Code

Street Address

City | Region | Postal Code | Country

CUSTOMER SUBMITTAL INFORMATION

Customer Name/Division

Buyer/Buyer Code

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 (Check at least one)

- ☐ Initial Submission
- ☐ Engineering Change(s)
- ☐ Tooling: Transfer, Replacement, Refurbishment, or additional
- ☐ Correction of Discrepancy
- ☐ Tooling Inactive > than 1 year
- ☐ Change to Optional Construction or Material
- ☐ Supplier or Material Source Change
- ☐ Change in Part Processing
- ☐ Parts 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 organization'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 which were made by a process that meets all 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 the declaration below.

EXPLANATION/COMMENTS:

Is each Customer Tool properly tagged and numbered? ☐ Yes ☐ No ☐ n/a

Organization Authorized Signature | Date

Print Name | Phone No. #REF! | 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)

Appendix 16: Supplier PPAP Checklist

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

Supplier PPAP Checklist

SUPPLIER NAME _____

DRAWING NUMBER _____ DRAWING REVISION AND DATE _____

WARRANT SUBMISSION DATE _____ LEVEL OF SUBMISSION: _____

		Yes	No	N/A
1	**Design Record**			
1a	Are design records included?			
Such as: part drawings (marked or ballooned), material specifications, detail drawings, customer drawings, etc.				
2	**Engineering Change Documents , if any**			
2a	Are there any document changes not incorporated in released engineering record?			
2b	Is approved/requested Interim Engineering change included?			
3	**Customer Engineering Approval, [if required]**			
3a	Does the customer require approval of design record?			
4	**Design FMEA**			
4a	Is the supplier responsible for the Design FMEA? If not, skip 4b, 4c			
4b	Are all potential failure modes included?			
4c	Are corrective actions planned and documented?			
5	**Process Flow Diagrams**			
5a	Is each step in the process completely and clearly defined?			
5b	Is each step in the process keyed to the PFMEA & Control Plan?			
5c	Does any rework or inspection points in Flow Diagram match the Control Plan?			
6	**Process FMEA**			
6a	Are all potential failure modes included?			
6b	Are the top 5 RPNs addressed with recommended corrective actions?			
6c	Are all CC & SC characteristics (process & engineering record) identified?			
6d	Are adequate controls in place for all CC & SC characteristics?			
7	**Dimensional Results**			
7a	Are the dimensions referenced (ballooned) to the drawing?			
7b	Are the correct number of parts layed out? (Six [6] parts unless other wise directed)			
7c	Do all drawing notes have a response?			
7d	Do results indicate compliance to drawing and note specifications?			
7e	Are any nonconformance identified on the layout results sheet?			
8	**Records of Material Performance Test Results**			
8a	Are material test (chemical, metallurgical, etc.) results included.			
8b	Are performance test results included?			
8c	Has testing specification been identified on all tests?			
8d	Is all testing summarized with actual criteria and data (pass/fail statement is unacceptable)?			
8e	Is the quantity tested identified (if required)?			
9	**Initial Process Capability Studies**			
9a	Does the data indicate the process is under control?			
9b	Is there evidence to demonstrate normally distributed data?			
9c	Are all CC / SC characteristics from the drawing (and drawing notes) included?			
9d	Are all PPK values equal to or greater than 1.67?			
9e	Are all CPK values (if available) equal to or greater than 1.33?			
9f	If PPK or CPK is less than required values complete the following:			
9f1	Is 100% inspection in place and defined in the Control Plan?			
9f2	Is a reaction plan established for special cause along with 100% inspection defined in CP?			
9f3	Is corrective action planned and a modified Control Plan included in PPAP submittal?			
9g	Are statistical charts and data included?			
9h1	Does the attribute data indicate zero (0) defects were found?			
9h2	Are controls in place to ensure CC/SC attribute characteristic will meet drawing requirement?			
10	**Measurement System Analysis Studies**			

		Yes	No	N/A
12	**Control Plan**			
12a	Is a Pre Launch Control Plan per APQP&CP requirements included in this submittal?			
12b	Is a Production Control Plan per APQP&CP requirements included in this submittal?			
12c	Are all sections filled out including evidence of cross functional team involvement?			
12d	Is Control Plan processes keyed to Flow Diagram and PFMEA?			
12e	Are Receiving Insp, Process Insp, Final Insp included in CP?			
12f	Are CC / SC characteristics from DFMEA, PFMEA, and drawing included in CP?			
12g	Are performance testing requirements identified and are they at the proper intervals?			
12h	Is the method to be used to demonstrate ongoing compliance for CC / SC identified?			
12i	Is all inspection gages, techniques, and equipment identified?			
12j	Are appropriate reaction plans included in the Control Plan?			
13	**Warrant**			
13a	Is the part name/number, engineering level, etc. of the warrant filled our correctly?			
13b	Is the "Supplier Manufacturing Information" & "Submission Information" correct?			
13c	Is the declaration for any restricted or reportable substances included?			
13d	Has IMDS information been submitted?			
13e	Has the "Reason for Submission" been correctly identified?			
13f	Is the "Submission Level" identified .			
13g	Are the "Submission Results" filled out correctly and completely?			
13h	Is the "Declaration" filled out correctly and completely (including production rate)?			
13i	Is there a need for information to be added to "Explanation/Comments" line?			
13j	Is the part's weight included to four (4) decimal places (x.xxxxkg) ?			
14	**Sample Production Parts**			
14a	Were "Sample Production Parts" submitted during development? (Information only)			
15	**Master Sample**			
15a	Has one (1) or more Master Sample been identified & retained at the supplier's facility?			
15b	Is one (1) or more Master Sample identified and included in this PPAP submittal?			
16	**Checking Aids**			
Note: checking aids can include fixtures, gages, models, templates used to verify customer specs.				
16a	Are all checking aids numbered and calibrated?			
16b	Are all checking aids numbered and included in the Control Plan?			
16c	Do all checking aids have acceptable Measurement Systems Analysis studies?			
17	**TDLM Specific Requirements**			
17a	Are approved PPAP Warrants for all sub-supplier components included?			
17b	Is a copy of the packaging instructions included?			
17c	Are cleanliness requirements met + definition how			
17d	Description of actions taken to avoid corrosion			
17e	ISO/ISO TS certificate valid			
17f	identification of tooling 'property of Tremec'			
17g	Run @ Rate (Capacity documentation)			
17h	Appearance Report (when required by Tremec			

Appendix 17: Production Demonstration Run

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

PRODUCTION DEMONSTRATION RUN
TREMEC REQUIREMENT

PART NAME(S):		SUPPLIER:	
		MANUFACTURING LOCATION:	
PART NUMBER(S):		SUPPLIER CODE:	
		DATE:	
CHANGE LEVEL(S):			
PROGRAM:			

Buyer/SDE concurrence (optional) _____

Calculation | Witnessed information | Input information

Data input from production P.O.:

Shared Machine? Yes or No (Y/N)			
A) Combined TREMEC P.O. Daily Required Capacity			
A1)TREMEC P.O. Daily Required Capacity	Part Number		Pieces/day
A2)TREMEC P.O. Daily Required Capacity	Part Number		Pieces/day
A3)TREMEC P.O. Daily Required Capacity	Part Number		Pieces/day
A4)TREMEC P.O. Daily Required Capacity	Part Number		Pieces/day
A5)TREMEC P.O. Daily Required Capacity	Part Number		Pieces/day
	Total (suma(A1:A5))		Pieces/day
B) TREMEC P.O. Shift Pattern			
B1) Number of shifts per day			shifts
B2) Production hours per shift			hours
B3) Number of production days per week			days

Data input from manufacturing process:

C) Downtime **per shift**			
C1) Lunches			hours/shift
C2) Breaks			hours/shift
C3) Changeover and/or set-up			hours/shift
C4) Operating time dedicated to other customers			hours/shift
Comments:			
C5) Scheduled/unscheduled downtime (as applicable)			hours/shift
Comments:			
D) Parts attempted during the PDR			attempted parts
E) First time through fallout during the PDR			failed parts
F) Length of PDR in hours	Start: _____ Finish: _____		hours
G) Acceptable parts witnessed at the PDR			pieces

In process calculations:

H) Available production hours/shift [B2-(C1+C2+C3+C4+C5)]		hours/shift
I) Available production hours/day [B1*H]		hours/day
J) TREMEC required parts per hour at the PDR [A/I]	#DIV/0!	parts/hour
K) Witnessed parts per hour at the PDR [G/F]	#DIV/0!	parts/hour

Requirements:

L) FTC calculation [((D-E)/D)*100] **Minimum requirement of 90%**	#DIV/0!	%
M) Difference between witnessed parts/hour and required parts/hour [K-J]	#DIV/0!	pieces
Must be 0 or greater for approval		

Appendix 18: Interim PPAP Worksheet

Right click on the place holder image, click "Worksheet Object" > Edit / Open / Convert the file

INTERIM PPAP WORKSHEET

Supplier

SUPPLIER NAME:	PART NAME:
SUPPLIER MFG DUNS CODE:	PART #:
EXPIRATION DATE:	
RESUBMISSION DATE:	OS #
APPLICATION:	ECL: DATE:
SUBMISSION LEVEL:	KG WT:

Supplier/Customer

Section 1 Supplier Performance and Validation Requirements

1. Performance requirements not fully met; status acceptable to move to a Saleable status * Yes:

2.Supplier Validation: Tremec Validation:

*NOTE: If Supplier's Validation is not complete, the Supplier Validation plan with status and timing must be attached

Section 2 Action Plans - must be completed - Additional sheets attached as necessary

Issues: List that apply with explanation for each:	15 Action Plan: to reach Approved PPAP and Owner for each:	16 Comp. Date:	17 GP-12 Plan

Document Control

Revision History

Revision Level	Revision Date	Changes Made	Approval
Rev 1.0	24 July 2018	Initial release of document	Daniel Hearsch