SUPPLIERS

QUALITY

ASSURANCE MANUAL
Dear Supplier:

In these times of global markets, it is not longer enough for many worldwide enterprises to promise their customers they will meet their requirements, in their country as well as abroad. Nowadays, markets are increasingly demanding standardized Quality Assurance Systems, which will guarantee their products and excellence services by enforcing the “Zero Defects” policy, among others. Therefore, some improvements to Quality Systems have been implemented through time, and today, the Technical Specification TS-16949 is the outcome of continuous improvement and a further step towards excellence. Moreover, it offers us the opportunity to be prepared for future changes, and to have an exporting competence embracing the Total Quality concept, since Total Quality is an endless race, as you shall know.

The General Director, General Leaders, Area Leaders and Personnel who are part of this Organization, are aware of the effort and dedication required to attain ISO/TS-16949 Certification in each of our plants, as well as to become a state of the art group of enterprises committed to a continuous and thorough search of Our Customers’ Satisfaction, thus we are requesting you, our suppliers, to participate and get involved in the process in order to reach this goal.

As part of our team, we would like to share this Quality Assurance and Supplier Development Manual with you, so that you may use it as a supporting tool to meet our Quality System’s Requirements.

Yours Sincerely,

Antonio Herrera Rivera
General Director of Kuo Power Systems
# TABLE OF CONTENTS

Letter of Director of Kuo Transmisiones ........................................... 2
Table of Contents .............................................................................. 3
Our Philosophy: Mission – Vision – Values ......................................... 3
Introduction ......................................................................................... 6

0.1 Kuo Transmisiones Goal ............................................................... 7
0.2 Purpose of Manual ....................................................................... 7
0.3 Scope .......................................................................................... 7
0.4 Supplier’s Responsibility ............................................................... 7
0.5 Kuo Transmisiones Policy .............................................................. 8
0.6 Supplier Development Philosophy ................................................ 8

0.6.1 Search and Selection Process of New Suppliers ....................... 9
0.6.2 Supplier Selection Process for New Business ......................... 10
0.6.3 APQP/PPAP Process ............................................................... 11
0.6.4 Supply Process and Supplier’s Performance Assessment ......... 12
0.7 Kuo Transmisiones Suppliers Quality System Requirements ....... 12

• ACP-007 PROCEDURE .................................................................. 13

1.0 Scope ........................................................................................ 13
1.1 General Information ................................................................... 13
1.2 Prototypes Requirements ............................................................... 13
1.3 Pre-production Requirements ....................................................... 13
1.4 Production Requirements ............................................................ 13

1.4.1 Controlled Shipments ............................................................. 14
1.4.2 Supplier Performance Monitoring .......................................... 14
1.4.3 Defective Material Report (DMR) ............................................ 14

2.0 References .................................................................................. 14
3.0 Instructions and Responsibilities .................................................. 15

o Prototypes Requirements ................................................................. 15

3.2 Kuo Transmisiones Buyer’s Responsibility .................................. 15
3.3 Supplier’s Responsibility ............................................................... 15

o Pre-production Requirements ......................................................... 18

3.4.1 Kuo Transmisiones Buyer’s Responsibility ................................ 18
3.5 Supplier’s Responsibility ............................................................... 18
3.5.2 Advanced Planning for Quality Product (APQP) ....................... 19
3.5.3 Operations Flowchart ............................................................. 19
3.5.4 Failure Mode and Effect Analysis (FMEA) ............................. 19
3.5.5 Pre-production and Production Control Plan ......................... 20
3.5.6 Statistical Process Control ...................................................... 21
3.5.7 Measurement Systems Analysis ............................................. 22
3.5.8 Production Demonstration Run .............................................. 22
3.5.9 Production Parts Approval Process Requirements (PPAP) ....... 26

3.5.8.2 PPAP Submittance ............................................................ 26
3.5.8.3 Samples for PPAP ............................................................ 26
3.5.8.4 PPAP Submittance Levels ................................................ 27
3.5.8.5 International Material Data System (IMDS) ......................... 29

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3.5.8.6 Safety and Risk Prevention (MSDS)

- **Containment Procedure in Pre-production**

3.6.1 Supplier’s Responsibility

  3.6.1.1 Process Validation

3.6.2 Plan Development

3.6.3 Duration of Containment

3.6.4 Material Identification

3.6.5 Outbound Criteria

3.6.6 Nonconforming Material Shipment Consequences

3.7 Product Validation

3.8 Identification of Parts from First Production Run (PPAP)

  - **Production Requirements**

3.9 Annual Layout (Annual Validation)

  3.9.1 Supplier’s Responsibility

3.10 Delivery Compliance

3.11 Quality Requirements in each Production Shipment

  3.11.b Deviated Material Identification

3.12 Critical and/or Significant Characteristics Requirements in Production

  3.12.1 Capability Studies (Cp, Cpk ≥ 1.33)

  3.12.2 Capability Studies (Cp, Cpk < 1.33)

  3.12.3 Reproducibility and Repeatability Studies (GR&R)

  3.12.4 Requirements for each Shipment

3.13 Defective Material Report (DMR)

  3.13.1 General Information

  3.13.2 Defective Material Report System (DMR)

  3.13.3 Quality Alert

  3.13.4 Issue Identification

  3.13.5 Responsibility

  3.13.6 Suspect Material

  3.13.7 Identification of DMR Origin and Type of Reject

  3.13.8 Potential DMR

  3.13.9 Determination of Quantities for DMR

  3.13.10 Identification of Shipments Subsequent to a DMR Issuance

  3.13.11 Corrections to the DMR

  3.13.12 General Information

  3.13.13 Disposition of Suspect Material

  3.13.14 8 Disciplines (Containment Actions)

  3.13.15 8 Disciplines (Corrective and Preventive Actions)

  3.13.16 DMR Appeal Process

  3.13.17 Cost Recovery Process

  3.13.18 Cost Recovery Appeal Process (DMR Section 3)

3.14 Procedure and Requirements for Controlled Shipments

  3.14.1 General Information

  3.14.8 Controlled Shipments Level I

  3.14.9 Controlled Shipments Level II

  3.14.10 Specific Containment Requirements for Controlled Shipments

  3.14.11 Specific Application Requirements for Controlled Shipments Levels I and II
3.15 Supplier's Quality Performance Monitoring
  3.15.1 General Information
  3.15.2 Line Stoppage
    3.15.2.1 Line Major Stoppage
    3.15.2.2 Assembly and/or Process Line Stoppage
  3.15.3 Supplier Quality Performance Assessment
    3.15.3.1 PPM of Disassembly Performance
    3.15.3.2 PPM of Manufacturing Process Performance
    3.15.3.3 PPM of Incoming Inspection Performance
    3.15.3.4 Complaints of KUO Transmissiones Customers Performance
    3.15.3.5 Quality Problems Solutions (BD’s) Performance
    3.15.3.6 PPAP’s Submission Performance
  3.15.4 Supplier Delivery Performance Assessment
    3.15.4.1 Delivery Performance
    3.15.4.2 Flexibility Performance in Production Schedule Changes
    3.15.4.3 Extra Freights Performance Attributable to Supplier
  3.15.5 Supplier Global Competitiveness Performance Assessment
    3.15.5.1 Supplier Cost Reduction Performance
    3.15.5.2 Quotation & Feasibility Response Performance
    3.15.5.3 Competitiveness Performance
  3.15.6 Supplier Global Performance Assessment
    3.15.6.4 Frequency of Supplier Occurrences in Controlled Shipping Level 2

3.16 Requirements for Tooling Identification, Inspection and Testing Devices, owned by KUO or KUO’s Customers

3.17 Global Special Tooling Guidelines and Payment Responsibility Matrix
  3.17.1 Special Tooling Guidelines and Definitions
  3.17.2 Tooling Cost and Audit Guidelines Purchase Contract Term
  3.17.3 Tooling Cost Documentation
  3.17.4 KUO Tooling Audits
  3.17.5 Tooling Payment Responsibility Matrix

4.0 Records

5.0 Definitions

6.0 Change Control

Appendix I: Supplier Profile and Self-Assessment Forms
Appendix II: KUO Transmissiones – Supplier Non-Disclosure Agreement Form
Appendix III: Quote Request and Manufacturing Feasibility Analysis Forms
Appendix IV: Level II Controlled Shipments Procedure Forms
Appendix V: New Production Lots Identification Form
Appendix VI: Tooling Worksheet Form and Visual Aid for Tooling Identification Property of KUO Customers
Appendix VII: Production Demonstration Run Calculation Worksheet
KUO TRASMISIONES
OUR PHILOSOPHY

MISSION
• ADD VALUE TO OUR CUSTOMERS BY FACING AND ASSUMING CHALLENGES.

VISION
• WE SHALL CONTINUE WITH A CUSTOMER-ORIENTED LEADERSHIP.
• WE SHALL BE A STEP FURTHER THE COMPETITION PARTICIPATING IN MARKET NICHES OF HIGHER VALUE.
• WE SHALL BE THE OWNERS OF OUR DESTINY FEELING FREE TO ACT AND REACHING THE BEST OF AGREEMENTS.
• OUR PEOPLE SHALL FACE CHALLENGES WITH MASTERY AND TEAM-WORK
• WE SHALL DEVELOP INNOVATIVE PRODUCTS BY MEANS OF WORLD-CLASS PROCESSES, WHICH WILL RENDER A HIGH PROFITABILITY AND CONSOLIDATE OUR IDENTITY AS THE PREFERRED SUPPLIER IN THE MARKET.

VALUES
• CUSTOMER-ORIENTED
• COMMITMENT
• DISCIPLINE
• CONSISTENCY
• INNOVATION
• RESPECT
• TEAM-WORK
0.0 INTRODUCTION

0.1 KUO Transmisiones Goal

KUO Transmisiones goal is to determine a common and attainable Standard to assure product Quality for both, KUO Transmisiones and our Customers. KUO Transmisiones adopts the Technical Specification TS 16949 Industry Standard, as the basis for the development of Quality Systems operation. These specifications apply to all suppliers, both Local and Foreign.

0.2 Purpose of Manual

This Manual contains KUO Transmisiones Specific Quality Requirements and Expectations for Suppliers. In addition, it describes other KUO Transmisiones procedures and provides some means of communication between (KUO Transmisiones – Supplier) Organizations. The main objective of this manual is to make KUO Transmisiones Suppliers aware of KUO Transmisiones requirements applicable to suppliers, so that these, in turn, are able to comply with them.

0.3 Scope

This Manual applies to all Local and Foreign suppliers of materials, products and services. These products shall be produced, controlled, inspected and tested according to all applicable specifications.

0.4 Supplier’s Responsibility

The supplier shall solve all questions related to KUO Transmisiones requirements before accepting the purchase order, otherwise KUO Transmisiones will assume that everything is clear and understood by the supplier. Suppliers shall set up and keep a control system that will guarantee that all materials are in accordance to what is being required in the purchase order, whether such materials are manufactured or processed by the supplier or by the sub-supplier. Suppliers shall comply with all the required product inspections and tests in accordance with the drawing, specifications and purchase order from KUO Transmisiones. The Supplier’s Quality System to control the product shall be documented and available for revision by our representatives, before production startup and during the life of the purchase order. The supplier shall refer the requirements on this manual to its supplier’s base.
0.5 KUO Transmisiones Policy

1. Each of the suppliers shall have access to this document.
2. Suppliers shall continue sending the information to the corresponding KUO Transmisiones plant using the due forms in this manual, and/or those required by KUO Transmisiones, and/or those required by the AIAG/IATF Reference Manuals.
3. Suppliers shall comply with the profile defined by KUO Transmisiones (including ISO 9001 and/or ISO/TS 16949 Requirements).
4. KUO Transmisiones group shall visit and perform audits to the supplier’s facilities when appropriate.

0.6 Supplier Development Philosophy

KUO Transmisiones is aimed to work with our suppliers to ensure Our Customers Satisfaction. This begins with the Advanced Planning of Quality Product (APQP), complying with Quality, Continuous Improvement and Variation and Scrap Reduction Requirements. Suppliers are responsible for ensuring the compliance to what has been required in the Purchase Order, Engineering Drawings to current level, and all the Specifications and Standards referenced on the drawings and the applicable International Standards. This Manual defines the Quality Systems the supplier shall use in order to control the material requested in the purchase order. These requirements are an extension to the purchase order requirements. Nowadays, the automotive sector is demanding the use of customer-oriented processes, where effectiveness and Efficiency may be measured through the outcome from organizations and customer satisfaction. This has fostered the use of models based on quality management, for example, ISO-9001 and ISO/TS-16949. Therefore, KUO Transmisiones has developed its own processes applicable to the supplier’s base.
0.6.1 Search and Selection Process of New Suppliers

KUO Transmisiones is searching for a profile in its supplier base, which shall comprise the following concepts:

a. Quality  
b. Competitive Cost  
c. Deliveries (Time and Quantity)  
d. State of the Art Technology  
e. Time To Market (On-time new products launchings)  
f. Environmental Responsibility  
g. Technical Skills  
h. Financial Viability  
i. Government Regulations  
j. Alignment with International Quality Systems Standards  
k. Support and Service

With the aim of counting with a global supplier’s base in alignment with KUO Transmisiones plants’ requirements and those of their customers.
KUO Transmisiones questionnaire is applicable to New Suppliers and/or for the updating of KUO Transmisiones suppliers, which is found in Appendix I of this manual. All KUO Transmisiones suppliers can be audited by our Supplier Development team, before they can be incorporated into the KUO Transmisiones Suppliers Portfolio with a minimum rate of 80% on his assessment, despite their status of certification by a third party.

The Non-Disclosure Agreement, which shall be filled in and signed by the supplier after having been notified by KUO Transmisiones, can be found in Appendix II of this Manual.

0.6.2 Supplier Selection Process for New Business

The supplier selected for the new business shall be the one who submits the following:

a) Technical Feasibility at a 100% (Including Machinery and Measuring Equipment)
b) More competitive price
c) Better “Lead Time”

“Red” Suppliers are not considered for new business, only after a status change (refer to ACP-007 Procedure, item 3.15 of this Manual).

The Feasibility Analysis form required by KUO Transmisiones can be found in Appendix III of this Manual.
0.6.3 APQP/PPAP Process

The supplier shall comply with APQP and PPAP Requirements of the AIAG/IATF Reference Manuals, and the requirements stated in Procedure ACP-007 of this manual.
0.6.4 Supply Process and Supplier's Performance Assessment

The Supplier shall comply with ACP-007 Procedure as per requirement 3.9 of this Manual.

Supplier Performance shall be assessed by KUO Transmisiones according to ACP-007 Procedure, item 3.15 of this Manual.

0.7 KUO Transmisiones Suppliers Quality System Requirements

ISO/TS-16949 is the goal all our suppliers shall based their Quality System on. KUO Transmisiones requires its suppliers to be certified by a third party, to ISO/TS-16949 or ISO-9001 management systems at the most updated revisions.

All ISO-9001 certified suppliers, shall comply with the Specific Requirements of KUO Transmisiones.

KUO Transmisiones reserves all rights to audit the Supplier’s Quality System and/or Manufacturing Processes due to supplier’s performance, even if certified by a third party.
1.0 SCOPE

1.1 General Information

This procedure applies to all production & preproduction parts, services and prototypes suppliers who are registered on the List of Suppliers Approved for any of KUO Transmisiones Plants, and defines the activities, responsibilities and requirements for the following processes:

a) Prototypes Requirements
b) Pre-production Requirements
c) Production Requirements
   c.1) Controlled Shipments
   c.2) Supplier’s Performance Monitoring in relation to:
      c.2.1) DMR (Defective Material Reports)
      c.2.2) PPM (Parts Per Million)
      c.2.3) Controlled Shipments
      c.2.4) Deliveries

1.2 Prototypes Requirements

Specific KUO Transmisiones requirements for its suppliers regarding the submittance of quality documentation and material identification for the validation of prototype parts, are described in this section.

1.3 Pre-production Requirements

Guidelines and procedures applicable to KUO Transmisiones Production Parts Approval Process (PPAP) are described in this section for its supplier’s base regarding a new part for production, which may represent significant risk for KUO Transmisiones facilities, and which applies as compulsory by KUO Transmisiones.

1.4 Production Requirements

This section describes KUO Transmisiones guidelines and procedures applicable to all suppliers in the production stage, which include sanctionatory procedures of Controlled Shipments, and everything related to supplier performance monitoring regarding Quality and Deliveries.
1.4.1 Controlled Shipments

This is a Sanctionary Procedure which, at KUO Transmisiones Plant own discretion, is
implemented to provide an additional assurance in order for KUO Transmisiones to only
receive parts and products which comply with the requirements specified in the design.
Controlled Shipments require additional verification activities to be implemented at the
supplier’s plant, or a third party plant for product control of the supplier in question.
Controlled Shipments’ costs shall be paid by Supplier.

1.4.2 Supplier Performance Monitoring

This section defines the methods used to identify, communicate and measure supplier
quality performance, based on the information generated by PPM behavior, number of
DMR’s issued and number of times a supplier has been placed in a Controlled Shipments
position.

1.4.3 Defective Material Report (DMR)

The DMR process defines how quality and supply defects and issues are documented and
communicated to the supplier in charge.

2. REFERENCES

2.2 First Approved Clause C9, 4.6 Purchases (July 01, 2001) IASG, QS-9000:1998
2.3 Quality Assurance Manual for Suppliers, Tremec January 2000
2.4 FMEA (Potential Failure Mode and Effects Analysis)
2.5 APQP (Advanced Product Quality Planning and Control Plan)
2.6 MSA (Measurement System Analysis)
2.7 PPAP (Production Part Approval Process)
2.8 SPC (Statistical Process Control)
2.9 General Motors Global Procedure GP-5
2.10 General Motors Global Procedure GP-12
2.11 ISO/TS-16949:2009
3. INSTRUCTIONS AND RESPONSIBILITIES

- **Prototypes Requirements.**

3.1. The supplier shall send the process feasibility analysis, along with each quotation response, to manufacture the product according to the specifications defined on KUO Transmisiones Engineering drawing; such feasibility analysis shall reflect the flow of operations of the process required to manufacture the part, as well as the equipment description, machinery and measuring instruments suitable for the operation.

3.2. **KUO Transmisiones Buyer’s Responsibility.**

Send to Supplier:

3.2.1. Purchase Order for prototype parts including all purchasing data, adding the total value and quantity of prototype parts, as well as the delivery date as required by the plant.

3.2.2. Tooling, Gages and Measuring Instruments Purchase Orders, required for the batch manufacturing of prototypes (according to what has been indicated on the due supplier quotation), where they shall include the tooling, gage or measuring instrument description, quantity and terms of payment. In some cases, this purchase order shall be included within the same purchase order of prototype parts.

Last-level-Engineering Design of prototype (shall be the same as that shown on the purchase order) where special characteristics shall be indicated. Such characteristics shall be identified as follows:

- CC
- SC
- P
- P
- KCC
- MCC
- SPC
- DR
- PTC

3.2.3. Copy of Engineering Specifications referred to in the design.

3.3. **Supplier’s Responsibility**

3.3.1 When the supplier receives the purchase order, he shall send a Process Development Plan to the KUO Transmisiones Buyer and SDE, indicating the design, manufacturing, failure prevention, assays and programs for the following:

1) Tooling
2) Manufacturing Frames
3) Inspection Frames, gages and Testing Equipment.

Refer to APQP Manual for further information on prototype stage.

3.3.2 Previous to the batch manufacturing of prototypes, the supplier shall develop the Prototype Control Plan, where critical and/or significant dimensions and/or specifications indicated on
the design (see 3.2.3) shall be included. This document, signed by the supplier, shall be sent to the Supplier Development Engineer for review and approval, previously to prototypes manufacturing startup.

3.3.3 The documentation and requirements to be sent by the supplier, together with the prototype batch shipment, are as follows:

3.3.3.1 PSW (Part Submission Warrant) making clear that it is a prototype batch
3.3.3.2 Numbered Design
3.3.3.3 Inspection Results for 5 parts inspected at a 100%, of all dimensions indicated on the design, or whichever was agreed upon with KUO Transmisiones SDE.
3.3.3.4 100% Inspection result for all the parts which conform the prototypes batch, with the dimensions described as critical and/or relevant in the design (see 3.2.2)
3.3.3.5 Metallographic and/or Metallurgic Report according to design specifications.
3.3.3.6 Material Report (raw material) as per design specifications
3.3.3.7 Results of Tests made to Engineering Specifications (tensile stress test to a representative test tube of the prototype batch for Aluminum and Grey Iron Casts, with graphical evidence of Stress-Deformation curve behavior, Yield Point and Last Tensile Stress, among others, as per ASTM E8) according to design specifications. When applicable
3.3.3.8 Prototypes Control Plan approved by the Suppliers Development Engineer (see 3.3.2).
3.3.3.9 Traceability. The parts shall be identified according to the component design. Numerically, from [1] to [the total number of parts of the batch], with this identification matching the number indicated on the dimensional reports (inspection results), the engineering level, as well as the number of batch purchased, shall be indicated. This shall comply with the next format:

**LEVEL – BATCH – CONSECUTIVE/TOTAL**

Example: AB – 2 – 13/50

Where...

- **LEVEL**: Level of design engineering used for the manufacturing of the prototype (e.g: AB).
- **BATCH**: Number of batch purchased for the same prototype part number during the project’s life (e.g.: 2, which means second batch purchased for the same prototype part number).
- **CONSECUTIVE/TOTAL**: Consecutive numeric identification according to the total number of parts, which conform the prototypes batch (e.g.: 13/50, which means: part number 13 of the total 50-part batch purchased.

Note: In the case of bolts, latches, shims, springs, nuts, pins, etc., where part identification may become difficult, the batch shall be identified (box, bag, etc.) with a tag containing the above mentioned information. The color of the tag shall differ from batch to batch.
3.3.4 When prototype parts are received, the KUO Transmisiones plant Inspection Receipt Area, will inspect a batch part at a 100% in accordance to the design, in order to be able to ratify the reliability of the information provided by the supplier. In case there are nonconforming items to design, and whose supplier report indicates conformances, the supplier shall be penalized for each nonconforming item, and an outside supplier (third party) approved by KUO Transmisiones, shall be used to size the rest of the parts within the batch, charging the supplier as per the fee agreed by such outside supplier. In case there is a non-conformance regarding prototypes performance, whose issue is attributable to the supplier, a DMR (Defective Material Report) shall be sent to notify the supplier on such issue, and the supplier shall decide on the batch according to the indications shown on the due DMR, and if necessary, the supplier shall replace the whole batch of the prototypes sent.

3.3.5 For parts that are purchased as “Ready to be Used” (or LPU, which is the acronym in Spanish) whose semi-finishes are the responsibility of the supplier and the sub-supplier, all the designs released by KUO Transmisiones shall be validated (casting, forging and/or assembly components). Therefore, the supplier shall send:
3.3.5.1 The documentation described in item 3.3.2
3.3.5.2 (PSW) Guarantee for each number part supplied by the sub-supplier and approved by the supplier
3.3.5.3 (PSW) Guarantee for each part number for KUO Transmisiones approval
3.3.5.4 Sub-supplier control plan for each part number
3.3.5.5 Dimensional report of 2 parts of each component, inspected at a 100%, for all the characteristics of each of the designs released by KUO Transmisiones, where the supplier is responsible for the supply.
3.3.5.6 100% inspection results for all the parts that conform the prototype batch, with the dimensions, shown on the design, indicated as critical and/or relevant (see 3.2.3.)
3.3.5.7 Numbered design for each part number
3.3.5.8 Tests Results to Engineering Specifications according to the design specifications for each part number. When applicable.

When the “RFU” component is approved, KUO Transmisiones will also approve each of the PSW’s for each part number, which constitutes the final product supplied by the vendor. KUO Transmisiones approval of all part numbers, which constitute the product supplied by the vendor, shall be in the name of the Supplier and not of the sub-suppliers.

- **Pre-production Requirements.**

3.4 The supplier shall send along every quotation response, the process feasibility analysis to manufacture the product according to the specifications provided on the KUO Transmisiones Engineering drawing. Such feasibility analysis shall show the flow of operations of the process
required to manufacture the part, as well as the equipment, machinery and measuring instruments
description required by operation.

3.4.1 KDU Transmisiones Buyer’s Responsibility

Send to supplier:

3.4.1.1 Purchase Order for Pre-Production including all the purchase details, adding the part
price and the required PPAP delivery date at KDU Transmisiones plant.

3.4.1.2 Tooling, Gages and Measuring Instruments Purchase Orders, required for the
manufacturing of products (according to what has been indicated on the proper supplier
quotation), where they shall include the tooling, gage or measuring instrument description,
quantity and terms of payment. In some cases, this purchase order shall be included within
the same purchase order of production parts.

3.4.1.3 Release of last-level Pre-Production Engineering Design (shall be the same as that
shown on the purchase order), where special characteristics shall be indicated as follows:

3.4.1.3a Critical or Significant Characteristics

CC  SC  KCC  MCC  DR  PTC  SPC

3.4.1.3b Standard Characteristic

3.4.1.3c Pass Through Characteristics

3.4.2 Copy of Engineering Specifications referred to in the design.

3.5 Supplier’s Responsibility

3.5.1 When the supplier receives the purchase order, he shall send a Process Development Plan
to the KDU Transmisiones Buyer and SDE, indicating the design, manufacturing, failure
prevention, assays and time tables for the following:

1) Tooling
2) Manufacturing Frames
3) Inspection Frames, gages and Testing Equipment.
4) Manufacturing Process Development including everything related to planning tools:

- Operations Flowchart (3.5.3)
- PFMEA (3.5.4)
- Pre-Production and Production Control Plan (3.5.5)
- Process Sheets and Work and Inspection Instructions
- Pre-Production Run
- GR&R studies or other in accordance with the MSA (see 3.5.7)
• Capability Studies (see 3.5.6) regarding Critical and/or significant characteristics for the Product and/or Process (see 3.4.1.3)
• Packing Method and Type
• PPAP Submittance to KUO Transmisiones (See PPAP Manual)

Refer to APQP Manual on the Pre-production stage and the PPAP Manual for further reference.

3.5.2 ADVANCED PLANNING FOR QUALITY PRODUCTS PROCESS (APQP)

The Advanced Planning for Quality Products (APQP) is a standard for the automotive industry, by which the new products are introduced into the market. The APQP is a structured method that provides the necessary steps to ensure that a product meets the customer requirements. It is also one of the reference manuals of the AIAG/IATF.

3.5.2.1 The Supplier Development Engineer (SDE) and the KUO Transmisiones Buyer, are responsible for validating the supplier APQP process, as per the last edition of the reference manual.

KUO Transmisiones customer may request the APQP and PPAP documentation from the supplier, when required, for its review and verification. In case the requirements are not being complied with, the supplier will have to take proper action to attain the requirements from KUO Transmisiones and its Customer.

3.5.3 OPERATIONS FLOWCHART

The supplier shall comply with the elaboration of the Operations Flowchart, where KUO Transmisiones specific requirements are the following:

The Process Operations Flowchart shall show the sequence of operations of all the process by operations, Inspections, Transportation, Storage, etc.

3.5.3.1 The sequence of operations shall be in accordance with the sequence defined on the KUO Transmisiones Engineering drawing.
3.5.3.2 The machinery and the equipment used in each operation shall be described.

3.5.3.4 Time used by operation shall be described
3.5.3.5 “Bottle Neck” operations shall be identified for the process, and machine capacity studies shall exist
3.5.3.6 Critical machinery shall be identified according to the following:

+ By loads
+ By maintenance
By cycle time

+ By capability (Cpk)

+ By the complexity of Operations and/or by operator skills

3.5.3.7 The Process Operation Flowchart shall be approved by the “Core Team”

3.5.4 POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS (FMEA)

The supplier shall comply with the methodology and criteria defined on the AIAG/AITF Reference Manual. The FMEA (Potential Failure Mode and Effects Analysis), as well as the use of the official format of the AIAG/AITF to the last revision and KUO Transmisiones specific requirements, are as follows:

3.5.4.1 Severity on the PFMEA between 9 and 10 (applicable to critical characteristics, see 3.4.1.3)

3.5.4.2 Severity on the PFMEA between 5 and 8 (applicable to significant or standard characteristics, see 3.4.1.3)

3.5.4.3 Characteristic class shall be indicated on the PFMEA and control plan

3.5.4.4 The section “Current controls of process prevention and detection”, of the PFMEA, shall emphasize the use of SPC (X-R, X-S charts, etc) and the Implementation of error-proofing devices (for example: error proofing / Poka Yokes, applicable for Critical and Pass Through Characteristics)

3.5.4.5 Any number of Risk Priorities greater than 40 (NPR > 40) shall have recommended actions.


3.5.5 PRE-PRODUCTION AND PRODUCTION CONTROL PLAN

The supplier shall comply with the Control Plan technique and methodology stated on the AIAG/IATF (APQP & Control Plan) Reference Manual, as well as with the use of the official format of the AIAG/IATF as of last revision. KUO Transmisiones specific requirements for the critical and/or significant characteristics (see 3.4.1.3) are the following:

3.5.5.1 Include the type of characteristic, whether it is special (see 3.4.1.3)

3.5.5.2 Include an inspection at a 100% of all the special characteristics (see 3.4.1.3) in the Pre-Production Control Plan. All readings shall be recorded and used to estimate capability studies (Critical Characteristics: Cpk≥2.0, Ppk≥2.0, Significant Characteristics: Cpk≥1.67, Ppk≥1.67, Standard Characteristics: Cpk≥1.0, Ppk≥1.33 (see 3.5.6)).
3.5.5.3 When the process is not capable, an improvement plan shall be in place. The inspection at a 100% shall be indicated on the Production Control Plan, until the process capability meets the requirements; keeping the records documented for each reading when dealing with measuring instruments by means of a continuous variable. In order to use the inspection at a 100%, it is recommendable to use alternate control methods, between continuous variables and discrete variables, whose purpose is first to ensure a 100% compliance of requirements and second, collect data that will help us monitor the process to carry out the capability studies, as well as the decision-making process. Regarding discrete variables, it is recommendable to use measuring instruments by attributes, as well as control charts per attributes (see “Containment for Pre-Production” Procedure, item 3.6). When have been demonstrated the process is capable, the use of SPC (X-R Charts) must be defined in the control method for the characteristics in the Production Control Plan along the life of the product and meet with the requirements of item 3.11.

3.5.5.4 For all characteristics not included in item 3.4.1.3, the supplier shall define the method that will ensure the compliance of KUO Transmisiones drawing specifications.

3.5.5.5 The Production Control Plan shall be approved by the SDE, until the supplier shows the right capability to control the special characteristics (see 3.4.1.3 or those defined by the nature of the process (See “Containment Procedure for Pre-production”, item 3.6).

Refer to last edition APQP & Control Plan (AIAG/IATF) manual for further information.

3.5.6 STATISTICAL PROCESS CONTROL

The supplier shall implement the Statistical Process Control regarding the critical and/or significant characteristics (see 3.4.1.3), or in accordance with the engineering design nomenclature, defined by KUO Transmisiones and those defined by the nature of the process. The supplier shall comply with the following KUO Transmisiones specific requirements in order to control the special Characteristics:

3.5.6.1 Process Preliminary Capability in Pre-production shall be, for Critical Characteristics: Cpk≥ 2.0, Ppk ≥ 2.0, Significant Characteristics: Cpk≥1.67, Ppk≥1.67, Standard Characteristics: Cpk≥1.0, Ppk≥1.33

3.5.6.2 Readings used to perform Capability Studies shall be taken from the Pre-production run (PPAP) and shall include at least 30 equally spaced readings within time’s domain. In order to have more confidence level for the capability study, it shall be carried out with 100 readings (25 sub-groups, 4 readings each).

3.5.6.3 All the characteristics described in item 3.4.1.3 shall be monitored under a strict Statistical Process Control, according to AIAG, SPC y PPAP Reference Manuals last revision and PTC’s an error proofing must be implemented in the process to ensure the existence.
3.5.6.4 Each quarter, the capability study of all the special characteristics (see 3.4.1.3) shall be sent to KUO Transmisiones SDE, together with the readings where the Cpk value is kept in compliance. In case there is a Cpk below the requirement, then compliance to items 3.5.5.3 and 3.6 shall be required.

For DR characteristic the minimum Cpk is 1.0, below that values an aggressive improvement plan is requested and while the process capability is demonstrated a 100% inspection by variables is required.


### 3.5.7 MEASURING SYSTEMS ANALYSIS

The supplier shall perform Repeatability & Reproducibility, Linearity, Bias and Stability on all gages and measuring instruments used for the measurement of special and all characteristics identified on KUO Transmisiones designs and Control Plan as per 3.4.1.3, and those defined by the nature of the process. KUO Transmisiones specific requirements are:

3.5.7.1 Studies shall be in force for one year, only if no change is made on the measuring system (Operator, gage or inspection method). R&R studies shall comply with MSA (Measurement System Analysis) Methodology, where KUO Transmisiones acceptance criterion is \( \leq 20\% \) (when dealing with continuous variables). As for discrete variables, criteria provided on the MSA shall be used.

3.5.7.2 Each year, or every time a change is made to the measuring system (Operator, Gage or Inspection Method), the supplier shall notify and send Reproducibility and Repeatability Studies to KUO Transmisiones SDE. In regards to Linearity, Bias and Stability studies, they shall all depend on the measuring equipment used; sending of such studies shall be under KUO Transmisiones SDE consideration.

Refer to last edition MSA (AIAG and IATF) Manual for further information.

### 3.5.8 PRODUCTION DEMONSTRATION RUN

The supplier shall perform the Production Demonstration Run to assure that daily capacity required by KUO facility is reached. Instruction about how must be filled out the Production Demonstration Run Calculation Worksheet is described below:

Shared Machine?  Yes or No (Y or N)  
A) The combined KUO Daily Required Capacity should be obtained from the RFQ (Request For Quotation) - "Annual Volume"

---

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If shared Machine = N:

A1) Input the Daily Required Capacity and part number from the KUO Purchase Order.
A2-A5) Leave as the default 0.

If shared Machine = Y, shared with KUO parts only:

A1-A5) Input the Daily Required Capacity and part number from the KUO Purchase Order for the various parts being validated.

NOTE: The assumption for this calculation is that all of the part numbers have the same operating pattern and the same takt time.

NOTE: If the components being validated have varying operating patterns or different takt times, then separate calculation worksheets should be completed for each part.

If shared Machine = Y, shared with other customers:

A1-A5) Input the Daily Required Capacity from the KUO Purchase Order for the various parts being validated.

C4) In hours/shift, input the time dedicated per shift to other customers.

NOTE: The assumption for this calculation is that all of the part numbers have the same operating pattern and the same takt time.

NOTE: If the components being validated have varying operating patterns or different takt times, then separate calculation worksheets should be completed for each part.

B) The shift pattern should be obtained from the current shifts information of supplier

B1) Number of shifts per day
B2) Production hours per shift
B3) Number of production days per week
NOTE: Please input appropriate comments in the blanks provided.

C) Downtime per shift

C1) Lunches - The amount of time, in hours per shift, that the production process is not operating due to lunch.

C2) Breaks - The amount of time, in hours per shift, that the production process is not operating due to breaks.

C3) Changeover and/or set up - The amount of time, in hours per shift, that the production process is not operating due to changeover and/or set up activities. Only changeovers that were quoted to occur during the production operating pattern should be considered for this calculation.

Changeovers or set up not conducted every shift should be calculated on a per shift basis (e.g. Changeover time per week divided by the number of shifts per week = changeover time per shift).

NOTE: Please indicate when during the production process the changeovers will be implemented (if they are conducted during the quoted operating pattern, or if they are to be conducted during "off shifts").

C4) Operating time dedicated to other customers - The amount of time, in hours per shift, that the production process is operating/manufacturing product for other customers.

Operating time dedicated to other customers calculated on a per shift basis (e.g. operating time per week divided by the number of shifts per week = changeover time per shift).

NOTE: Please input appropriate comments in the blanks provided.

C5) Scheduled/unscheduled downtime not considered - The amount of downtime, in hours per shift, that was not considered. This could be any downtime such as PM, changeover, etc. that was not included in the development of the shift pattern/pieces per day quantity.

Scheduled/unscheduled downtime should be calculated on a per shift basis (e.g. operating time per week divided by the number of shifts per week = changeover time per shift).

NOTE: Please input appropriate comments in the blanks provided.
D) The parts attempted during the PDR are the total number of parts the supplier produced including rejects/scrap.

E) First time through fall out during the PDR is the number of parts that were rejected from the manufacturing process during first evaluation. This is not the final number of unacceptable parts, but only those that failed first time through the process. (This number will be used in the FTC calculation.)

F) Length of PDR in hours is the measured time it took to conduct the production demonstration run. Please input start and finish time in cells provided.

G) Acceptable parts witnessed at the PDR are the total number of parts, minus any rejects, which were demonstrated during the production run. (May differ from first time through fallout.)

H) Available production hours/shift are the net hours per shift the supplier has available to build product not including any scheduled downtime.

I) Available production hours/day are the net hours per day the supplier has available to build product.

J) KUO required parts per hour at the PDR are the total number of acceptable parts the supplier must produce, in an hour’s time, necessary to satisfy KUO.

K) Witnessed parts per hour at the PDR are the number of acceptable parts witnessed by the KUO team, which the supplier produced within an hour’s time.

L) FTC (First Time Capability) is the percentage of acceptable parts witnessed at the production demonstration run out the total number of parts attempted at the PDR.

   If the KUO requirement of 90% or greater is met, the cell will turn green.
   If the KUO requirement is not met (less than 90%), the cell will turn red.

   NOTE: If the FTC is less than 90%, the KUO team shall take product and process technology, complexity, supplier experience, and the effectiveness of defect containment actions into account when deciding whether the demonstrated lower FTC values are acceptable with a documented deviation. A KUO Supplier Quality Manager's signed approval is required for deviation from the KUO FTC requirement.

M) The difference between required parts/hour and witnessed parts/hour gives the total number of parts over or under the KUO requirement.
If the part difference is greater than (the KUO required parts per hour + 10%), the cell will turn green indicating the operation speed is acceptable. i.e. $(J + 10\%) \leq M$, then cell = green (requirements met).

If the part difference is between 0 and (the kuo required parts per hour + 10%), the cell will turn yellow indicating the Operation speed has met requirements, but the part difference is very close and may require additional attention. i.e. $0 \leq M < (J+10\%)$ then cell = yellow.

If the part difference is less than 0, the cell will turn red indicating the requirement is not met. i.e. $M < 0$ the cell = red.

NOTE: In the event $(M)$ is yellow, it is strongly advised to conduct an Extended Run to stress the supplier’s production line and increase confidence in the supplier’s ability to meet KUO requirements.

### 3.5.9 PRODUCTION PARTS APPROVAL PROCESS REQUIREMENTS (PPAP)

All product suppliers shall comply with “PPAP, Production Parts Approval Process”, to validate that all the requirements for the design information and KUO Transmisiones engineering specifications (last level), are adequately understood by the supplier, and that the process designed has the potential to manufacture products that will comply with these requirements during a validation run, as well as during normal production.

**3.5.9.1** KUO Transmisiones Buyer shall become the official contact in order to communicate last engineering level design specifications, as well as the changes made on KUO Transmisiones Engineering levels, to the suppliers. In case there are questions about the engineering level, the supplier shall request KUO Transmisiones Buyer/SDE, the due clarifications in writing.

**3.5.9.2** PPAP Submittance

PPAP shall be submitted to KUO Transmisiones by the supplier, when one or more of the following cases come into play:

- A New Product.
- Correction of inconsistencies in Parts previously submitted with PPAP
- Engineering changes in the design of a product previously submitted under PPAP and approved by KUO Transmisiones.
- Changes to the Process that was used in the previously approved part*
- Tooling: Transference, Replacement, Repair or additional

*PPAP Submittance for the replacement part requires additional information and approval.**
• Change of supply sources for sub-contracted parts, materials or services (eg.: semifinished parts, Heat treatment, Coatings, etc.)*
• Change to Optional Construction or Material*
• Parts Produced in a Different Place than that previously approved*
• Inactive Process for more than a year.
• Changes on the inspection / test method for new techniques.
• Modifications to the packing or preservation method (quantity, size, material, labeling, corrosion protection, etc.)
• Yearly revalidations.
• Change of Firm’s Registered Name.
• When the SDE considers it to be appropriate.

* It is important to clarify that any change must be notified with enough time to do a joint timing plan about to control the inventories and validation of the new change with the KUO Transmisiones plant and their customers. Normally, is used a stock of 6 months of original product after the new PPAP submission to support the required time for the new PPAP approvals.

3.5.9.3 Samples for PPAP

According to PPAP scope, the Supplier shall submit PPAP documentation in accordance with the formats provided on AIAG PPAP Manual, in its last revision and first 5 initial samples, sized at a 100% as per the design, according to PPAP reference Manual requirements, applicable to PPAP Submittance level agreed upon with KUO Transmisiones SDE.

3.5.9.4 PPAP Submittance Levels.

KUO Transmisiones requires all its Suppliers to submit a level 3 PPAP in each presentation, according to PPAP reference Manual, unless otherwise provided by procedures negotiated between KUO Transmisiones, SDE and the Supplier.
<table>
<thead>
<tr>
<th>Item</th>
<th>Requirement</th>
<th>Submittance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Product Design Records</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>- For details of properties of components</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>- For details of the rest of the components</td>
<td>R</td>
</tr>
<tr>
<td>2</td>
<td>Changes to engineering documents (when applicable)</td>
<td>R</td>
</tr>
<tr>
<td>3</td>
<td>KUO engineering approval , if required</td>
<td>R</td>
</tr>
<tr>
<td>4</td>
<td>Design FMEA. If supplier is the owner of the design</td>
<td>R</td>
</tr>
<tr>
<td>5</td>
<td>Process Flowcharts (See 3.5.3)</td>
<td>R</td>
</tr>
<tr>
<td>6</td>
<td>Process FMEA (See 3.5.4)</td>
<td>R</td>
</tr>
<tr>
<td>7</td>
<td>Dimensional Result ( 5 parts)</td>
<td>R</td>
</tr>
<tr>
<td>8</td>
<td>Tests, Material, Performance Results</td>
<td>R</td>
</tr>
<tr>
<td>9</td>
<td>Initial Study of Process Capability (see 3.5.6)</td>
<td>R</td>
</tr>
<tr>
<td>10</td>
<td>Measuring System Analysis Study (see 3.5.7)</td>
<td>R</td>
</tr>
<tr>
<td>11</td>
<td>Laboratory Scope Documentation (According to ISO/TS-16949, 7.6.3.1 y/o 7.6.3.2)</td>
<td>R</td>
</tr>
<tr>
<td>12</td>
<td>Pre-Production and Production Control Plan (See 3.5.5)</td>
<td>R</td>
</tr>
<tr>
<td>13</td>
<td>Part Submission Warrant (PSW)</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Report IMDS Reference Number in PSW (See 3.5.9.5)</td>
<td>S</td>
</tr>
<tr>
<td>14</td>
<td>Appearance Approval Report. (When applicable)</td>
<td>S</td>
</tr>
<tr>
<td>15</td>
<td>Checklist of bulk material requirements (only for bulk material in PPAP)</td>
<td>R</td>
</tr>
<tr>
<td>16</td>
<td>Product Sample (5 samples)</td>
<td>R</td>
</tr>
<tr>
<td>17</td>
<td>Master Sample</td>
<td>R</td>
</tr>
<tr>
<td>18</td>
<td>Inspection Aids</td>
<td>R</td>
</tr>
<tr>
<td>19</td>
<td>Additional Records. When KUO</td>
<td>R</td>
</tr>
<tr>
<td>20</td>
<td>Production Demonstration Run Results</td>
<td>R</td>
</tr>
<tr>
<td>21</td>
<td>Evidence of Tooling, Inspection &amp; Testing Devices owned by KUO or KUO’s Customers (See 3.16)</td>
<td>S</td>
</tr>
</tbody>
</table>

**S** = The supplier shall submit the designated activity for KUO Transmisiones part approval and retain a copy of the records, or the item documentation in the appropriate place, including manufacturing.

**R** = The supplier shall retain this in the appropriate place, including manufacturing, and have it available when requested by KUO Transmisiones

* = The supplier shall retain this in the appropriate places and submit to KUO Transmisiones when requested to do so.

**3.5.9.5 International Material Data System (IMDS)**

As part of a new regulation for the Automotive Industry regarding the supply of information on the chemical composition of materials, being assembled in vehicles, a data base has been developed to count on information in reference to a future recycling of vehicle materials. It is mandatory for all the automotive industry suppliers to provide such information.

Nowadays, the main automobile manufacturers world-wide have created the *International Material Data System (IMDS)* for this purpose. Information regarding the chemical composition shall be uploaded in the following Web page: [www.mdsystem.com](http://www.mdsystem.com). Each supplier is accountable for issuing the information on the chemical composition of the materials supplied to KUO Transmisiones, on the above mentioned page. Any company can have access to the plant and obtain a free ID to sign in for IMDS. When uploading a part, the KUO Transmisiones plant ID number shall be entered. To know the ID number for the KUO Transmisiones plant, please contact your SDE in order to be given such IMDS Number.

**3.5.9.5.1** The supplier shall send, along with PPAP documentation, the IMDS reference number and the part number submitted to the plant, after such IMDS number has been approved by the KUO Transmisiones plant.

**3.5.9.5.2** Non-compliance to such requirement by the supplier, shall result in PPAP’s rejection.
3.5.9.6 SAFETY AND RISK PREVENTION:

3.5.8.6.1 All shipments from the supplier to KUO Transmisiones shall be delivered with the proper “Material Safety Data Sheet” (MSDS) when applicable to the product, according to NFPA 704 and HMIS Code. With the purpose of minimizing or eliminating health risks regarding the staff and/or the environment, storage, etc., products that are considered and are classified as contaminating or hazardous, such as those described next, shall be included in this Sheet as well:

- Oils and Lubricants
- Adhesives and Sealants
- Chemicals and Solvents
- Paints
- Coatings and Non-corrosive Substances

3.5.9.6.2 The supplier shall send the following information when required by the KUO Transmisiones buyer:

- Product Technical Sheet
- Product Safety Sheet
- Waste Treatment Methods generated by the Chemical Product, and the specific information determined by the KUO Transmisiones buyer

3.5.9.6.3 The supplier shall send the material perfectly identified, with a label indicating its safety rhombus. Such safety rhombus label shall be in a visible place, on the package containing the product, whether it is a box, can, glass bottle, tube, drum, etc.

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Very short exposure could cause death or serious residual injury even though prompt medical attention was given.</td>
</tr>
<tr>
<td>3</td>
<td>Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.</td>
</tr>
<tr>
<td>2</td>
<td>Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.</td>
</tr>
<tr>
<td>1</td>
<td>Exposure could cause irritation but only minor residual injury even if no treatment is given.</td>
</tr>
</tbody>
</table>
Exposure under fire conditions would offer no hazard beyond that of ordinary *combustible* materials.

<table>
<thead>
<tr>
<th>Flammability</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instability¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

¹ Prior to 1996, this section was titled "Reactivity". The name was changed because many people did not understand the distinction between a "reactive hazard" and the "chemical reactivity" of the material. The numeric ratings and their meanings remain unchanged.
**Special Hazards**

This section is used to denote special hazards. There are only two NFPA 704 **approved** symbols:

| **OX** | This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire |
| **W**  | Unusual reactivity with water. This indicates a potential hazard using water to fight a fire involving this material. |

Other symbols, abbreviations, and words that some organizations use in the white Special Hazards section are shown below. These uses are not compliant with NFPA 704, but we present them here in case you see them on an MSDS or container label:

| **ACID** | This indicates that the material is an acid, a corrosive material that has a pH lower than 7.0 |
| **ALK**  | This denotes an alkaline material, also called a base. These caustic materials have a pH greater than 7.0 |
| **COR**  | This denotes a material that is corrosive (it could be either an acid or a base). |
| **COR**  | This is a another symbol used for corrosive. |
| **COR**  | The skull and crossbones is used to denote a poison or highly toxic material. See also: CHIP Danger symbols. |
| **COR**  | The international symbol for radioactivity is used to denote radioactive hazards; radioactive materials are extremely hazardous when inhaled. |
| **COR**  | Indicates an explosive material. This symbol is somewhat redundant because explosives are easily recognized by their Instability Rating. |
• **Containment Procedure for Pre-Production.**

3.6 This Procedure is applied in order to Contain an Early Production. It requires a Pre-Production Control Plan, which is a significant improvement for the supplier’s production Control Plan itself, and which increases the reliability level to ensure that all the products bought, comply with KUO Transmisiones requirements. The Pre-Production Control Plan shall also be used to validate the Production Control Plan. The Pre-Production Control Plan shall take into consideration all the special characteristics (see 3.4.1.3), and those defined by the process nature, as well the potential areas identified during PPAP.

The purpose of this Procedure is to:

- Validate the supplier production control plan
- Protect our KUO Transmisiones plants, assembly, manufacturing and material warehouses during critical times of quality out of conformance.
- Document the supplier efforts to check his process control during startup, ramp up, future revisions of manufacturing processes, or when the manufacturing run has a three-month gap or a longer gap, between one run and the other.
- Ensure that any quality issue which may arise, is quickly identified, contained and corrected at the supplier’s facilities.
- Increase the involvement and visibility of supplier’s top management.

3.6.1 **Supplier’s Responsibility. The Supplier shall:**

3.6.1.1 **Process Validation:** Establish a validation process which contains the following elements:

3.6.1.1.1 Identify the personnel responsible to ensure the development and implementation of process verification.

3.6.1.1.2 Implement this procedure with an inbound date, outbound criteria, and outbound date as defined by KUO Transmisiones.

3.6.1.1.3 Set up containment stations at the plant, which shall be out of the line and separated from one another. They shall be checked independently from the standard manufacturing process, and located at the end of such process. Additionally, processes containment stations can be used even more effectively. This shall be documented and approved by KUO Transmisiones Supplier Quality Engineer/ Supplier Development Engineer.

3.6.1.1.4 Identify additional inspections, tests and dimensional checking required for containment stations based on the Special Characteristics of the Product (see...
3.4.1.3) and those defined by the nature of the process, high RPN and/or issues identified during product development and the process.

3.6.1.1.5 Train personnel in regards to the standardization of work performed in containment stations.

3.6.1.1.6 Establish a reaction plan for a single defect.

3.6.1.1.7 Implement an audit process for the containment, using management levels (Layer audit, including the plant leader, to ensure the conformance of the Pre-Production Control Plan.

3.6.1.1.8 Include subcontractors (Tier 3) in processes validation.

3.6.2 Plan Development: Develop a Pre-Production Control Plan, which is a significant extension of the production control plan, consisting on additional controls, inspections, audits, and tests to ensure conformance and capability of manufacturing processes. The plan needs to consider the following:

3.6.2.1 Increase of sample continuity/size stated in the Production Control Plan.

3.6.2.2 Verification of identification requirements.

3.6.2.3 Verification of “error-proofing devices” effectiveness.

3.6.2.4 Immediate implementation of containment, as well as irreversible corrective actions (non-negotiable and directed by KUO Transmisiones, due to the inefficiency of the action taken by the supplier) when the non-conformance is detected at the containment area or when it is given on the spot.

3.6.2.5 Documentation: Document the Pre-Production Control Plan using the format provided on the AIAG/AITF Reference Manuals, and Advanced Product Quality Planning & Control Plan (APQP). The Pre-Production Control Plan is not a substitute for the Production Control Plan, but it is an addition to it and it is used for validation.

3.6.2.6 Document additional inspections, functional tests and dimensional checks required for the containment station, or for the process check station with the Special Characteristics Control Plan, referenced on AIAG’s APQP manual-Supplement K. The reference states that the Pre-Production Control Plan’s document is considered as a specific operation itself.

3.6.2.7 Document the inspection work instruction for the containment station to ensure work standardization.

3.6.2.8 Document execution evidence and control plan validation. Data shall be available in an “Orderly Manner” (order, objectivity, clear, legible, etc.) for revision by KUO Transmisiones Supplier Development Engineer (SDE).

3.6.2.9 Document problem resolution for both quality systems, the internal one and that of KUO Transmisiones plant, using the format acceptable by KUO.
Transmisiones; including problem description, root cause, irreversible corrective action with breaking points, and adequate FMEA’S and Control Plan updating. Why – Why Analysis to identify the root cause, and learning application.

3.6.3 Duration of Containment: This procedure shall be implemented for a period of time, or quantity of parts specified by KUO Transmisiones, or until the Production Control Plan has been validated, whatever takes place first. If time and quantity have not been specified, the containment procedure shall still be in force through acceleration (“Ramp Up”) or a minimum of 2 weeks, whatever takes place first.

3.6.3.1 Containment inspection is mandatory for all parts requested during Pre-Production. Based on the acceptable performance documentation, which includes non-identified issues by KUO Transmisiones or during containment, KUO Transmisiones SDE may approve a 100% reduction on inspection requirements after manufacturing validation at the supplier facilities. This shall be documented and approved by KUO Transmisiones SDE.

3.6.3.2 In addition, measuring and testing requirements shall be identified by the supplier and/or KUO Transmisiones SDE, and approved by the latter.

3.6.3.3 Again, for validation at manufacturing facilities, a 100% inspection is a minimum requirement. The outbound criterion is mentioned in 3.6.5.

3.6.4 Identification: In order to indicate the compliance to Pre-Production containment requirements, stick a green circular label with approximately 25 mm in diameter, to shipment. This shall be signed by the person responsible for ensuring the right implementation of the Containment Procedure in Pre-Production, with the legend “Containment PP”.

3.6.5 Outbound Criteria: The supplier shall be meeting the requirements in order to be out of containment in Pre-Production after the validation of Process Control Plan effectiveness, also in accordance to the criteria listed herein (3.6.5.1 al 3.6.5.3). If the supplier is unable to meet all the criteria to be out of Pre-Production containment in order to identify non-conformances, the supplier shall continue with the necessary containment measures to isolate KUO Transmisiones, until quality issues have been satisfactorily solved for both, the supplier and KUO Transmisiones, and the supplier Production Control Plan has been validated.

3.6.5.1 Send the number of parts requested to meet production requirements as specified by KUO Transmisiones for the Pre-production period, with no issues identified on Pre-production containment, or identified by KUO Transmisiones. If
time or quantity is not provided, the period of time shall be that of the acceleration (“Ramp Up”).

3.6.5.2 If an issue is detected, in Pre-Production Containment or, by KUO Transmisiones, then the Pre-Production Containment procedure shall be in force for a minimum of 2 weeks after the corrective action implementation, or through the original period of time for this procedure, whatever takes place first.

3.6.5.3 If the Pre-production containment plan continues in order to identify non-conformances, the containment plan in Pre-production shall be kept in place, until the process control and capabilities have all been approved by KUO Transmisiones SDE, and the Production Control Plan validated by KUO Transmisiones SDE as well.

3.6.6 NONCONFORMING MATERIAL SHIPMENT CONSEQUENCES:

3.6.6.1 Failure to execute Pre-Production Containment procedure shall result in having to go to “Controlled Shipments Level II”.

3.6.6.2 Nonconforming material shipments to KUO Transmisiones plants, shall result in the automatic placement of supplier in “Controlled Shipments Level II”.

3.7 Product Validation.

The supplier shall comply with the requirements provided from item 3.4 to item 3.6. KUO Transmisiones shall validate the product according to PPAP (Production Parts Approval Process), for it is mandatory that every supplier complies with the requirements established. Product validation will take place only when the PSW (Part Submission Warrant) is approved by KUO Transmisiones Product Engineering agent, and the Production Control Plan approved by KUO Transmisiones SDE.

In case PPAP is rejected by KUO Transmisiones, the supplier shall make the necessary corrections, in a period of time agreed upon both parties, and submit the documentation for the corresponding validation again.

3.8 Identification of shipments after PPAP Approval

The supplier shall identify each shipment during the next 60 days after the PPAP approval by KUO Transmisiones which will need to be shipped to any KUO Transmisiones plant, the supplier shall identify such shipment in each case and in each side of the box, container, skid, bag, etc. with a light blue label showed, as reference, in appendix V of this manual, with the aim of giving special “treatment” (management of the breakpoint) to such material at the KUO Transmisiones plant. The measurements suggested for the label are: 11” (279.5 mm) Width X 8.5” (216 mm) Height (these
measurements are for reference only when the size of the used container). Supplier shall follow the next steps:

A) Select the number of the consecutive day of the shipment after the PPAP approval
B) Select the reason using the visual aid:
   B.1) Engineering Change
       B.1.1) When it is the case, then indicate the latest engineering level
   B.2) New Part Number
   B.3) New Supplier for the Part Number

• Production Requirements

3.9 Annual Layout

According to KUO Transmisiones policy and in order to comply with the specific requirements from our customers, all part numbers shall be revalidated on an annual basis.

3.9.1 Supplier’s Responsibility. The Supplier shall:

3.9.1.1 Submit a level 4 PPAP which includes:
   3.9.1.1.1 Level 4 PSW, whose main rationale for PPAP submittance is the “Annual Revalidation”.
   3.9.1.1.2 KUO Transmisiones Engineering Drawing Layout (Marked Drawing)
   3.9.1.1.3 Five Parts 100% Dimensional Report
   3.9.1.1.4 Capability Studies of the special characteristics (according to 3.4.1.3) and those defined by the nature of the process.
   3.9.1.1.5 GR&R Studies (Reproducibility and Repeatability), Linearity, Bias, Stability, etc. (according to 3.5.7) of the Measuring System used to assess the special characteristics (see 3.4.1.3) and those defined by the nature of the process.
   3.9.1.1.6 Raw Material Certificate
   3.9.1.1.7 Heat Treatment Certificate (as per KUO Transmisiones engineering drawing, if applicable)
   3.9.1.1.8 Certificate for complying with all KUO Transmisiones engineering tests according to specifications (as per KUO Transmisiones Engineering drawing, if applicable) or to what has been agreed upon with KUO Transmisiones SDE.

If the supplier is providing KUO with an assembly containing different components, whose drawings are owned by the supplier, then the supplier shall add the following to what is already being required from 3.9.1.1.1 to 3.9.1.1.8:

3.9.1.1.9 Sub-supplier Level 4 PSW approved by Supplier
3.9.1.1.10 Supplier’ Drawing Layout (marked drawing)
3.9.1.1.11 100% Five Parts Dimensional Report
3.9.1.1.12 Raw Material Certificate
3.9.1.1.13 Heat Treatment Certificate (if applicable)
3.9.1.1.14 Certificate for complying with all the Supplier Engineering tests (if applicable)

If the supplier is providing KUO Transmisiones with an “RFU” (Ready to Be Used) assembly and/or component, and KUO Transmisiones owns the drawings of such components and/or semi-finished products, then the supplier shall comply with the following:

3.9.1.1.15 Level 4 PSW of each component for KUO Transmisiones approval
3.9.1.1.16 Everything required from 3.9.1.1.2 to 3.9.1.1.14.

3.10 Delivery Compliance

The supplier shall comply with deliveries 100%, both in quantity and on a timely manner, in accordance with the KUO Transmisiones plant Production requirements. In case this does not happen, the supplier shall communicate with the KUO Transmisiones Plant Supply Production Control contact and deliver a Corrective Action Plan to prevent problem recurrence. In case this requirement is not met, the supplier shall be given a DMR (Defective Material Report) as provided in 3.13

3.10b Identification of Material in each Shipment

The supplier shall comply with the identification and traceability requirements. All material must be identified in each of the individual packaging of the total shipment, always. The type of the ID label must be a sticker, pre-printed and glued perfectly to the package, and must contain bar codes describing, as minimum, the following information:

- TREMEC Part Number
- TREMEC Part Description
- Quantity of Pieces
- TREMEC Purchase Order Number
- Manufacturing Lot Code
- Shipping Date

You can take, as an example, the ID Bar Code Label attached below
3.11 Quality Requirements in each Production Shipment

The supplier shall send the following information, in each production shipment, to the KUO Transmisiones plant, as a support for Quality and also to be able to comply with the Production Control Plans approved by KUO Transmisiones SDE:

3.11.1 Raw Material Certificate
3.11.2 Heat Treatment Certificate (If required by KUO Transmisiones Drawing)
3.11.3 Dimensional Report, which certifies the compliance to the Production Control Plan in accordance with the sampling and frequencies established.
3.11.4 Certificate for the compliance to Engineering specifications, such as: torque, stress, microstructure, saline chamber tests, etc. (if required by KUO Transmisiones drawing, and the shipment frequency shall be agreed upon between KUO Transmisiones SDE and the Supplier).
3.11.5 In regards to special characteristics (see 3.4.1.3) include in each shipment, in a yellow envelope (or other color agreed upon between the Supplier and KUO Transmisiones SDE), a copy of the readings for each special characteristics generated during the production runs with the legend: “SC’S READINGS” (or CC’s or DR’s depending on the type of characteristic).
3.11b Deviated Material Identification

When the supplier finds that the material is not complying with specifications, he shall notify so to KUO Transmisiones SQE. The KUO Transmisiones SQE shall review such non-conformance to specifications together with KUO Transmisiones Engineering, and if they consider the material could be deviated, then the supplier shall comply with the following:

3.11b.1 Request KUO Transmisiones for a Deviation (see 3.13.8)
3.11b.2 The Deviation request shall clearly describe the reason for such deviation, and an 8 D’s Report shall be enclosed describing the root cause(s) and corrective action(s) to be taken to prevent quality issues recurrences.
3.11b.3 If the supplier has already been given the approval of such deviation by KUO SQE in writing, then the Supplier shall enclose a copy of such deviation inside each container, package, case, bag, etc. before getting shipped to the KUO Transmisiones plant.
3.11b.4 The supplier shall not ship any materials to the KUO Transmisiones plant without KUO Transmisiones previous authorization.

3.12 Special Characteristics Requirements (see. 3.4.1.3) in Production.

3.12.1 Capability Studies. The supplier shall perform capability studies every three months during the year, and send such studies to KUO Transmisiones SDE and/or Buyer, via e-mail, no longer than 2 weeks after the previous quarter has ended. Capability studies shall include Cp and Cpk calculations with their respective readings. Readings to perform the capability studies must be taken from the X-R charts used in the process as SPC.

3.12.2 Capability Studies below the requirements. The supplier shall send KUO Transmisiones SDE and/or Buyer, via e-mail, the Run & Rate results (Total of parts produced, total of parts in and out of specification, etc.) obtained from the inspections at a 100%, using all the data collected during the quarter assessed, according to the Production Control Plan. In this case, the supplier shall be placed in regards to the “Containment Procedure for Pre-Production” and the criteria described in such procedure shall be applied.

3.12.3 Reproducibility and Repeatability Studies (GR&R). The supplier shall carry out the GR&R study, at least once a year, or when a change has taken place in the measuring system (Operator, Gage or Inspection Method); such study shall be sent to KUO Transmisiones SDE and/or Buyer via e-mail. These GR&R Studies shall comply with the methodology defined in the MSA, where KUO Transmisiones acceptance criterion is ≤ 20% (regarding continuous variables).
3.12.4 Shipment Requirements. The supplier shall comply with item 3.11


3.13.1 General Information

A DMR shall be issued when the KUO Transmisiones plant has verified that the supplier has fallen into a Non-conformance. Non-conformances which originate a DMR, are issues related to:

- **Quality**: Appearance, dimensions, finish, contamination, metallurgy, lack of operations, etc.

- **Packing**: Incorrect labeling, inadequate container, package damaged due to improper handling (damaged during transportation, poor stowage, loss), parts mixed within package, poor packing, etc.

- **Supply**: Over or under shipments (compliances over or under 100%), late deliveries, etc.

3.13.2 Defective Material Report System (DMR)

DMR’s are issued due to:

**Quality Receipt area personnel and/or the Supplier Quality Engineering (SQE)**: When engineering specifications are not complied with and/or there are inconsistencies in validated processes.

**Traffic area personnel**: When there are issues originated by carriers, such as: poor handling (damage during transportation, poor stowing, loss, etc.), late material deliveries, etc.

**Purchasing Parts Production Control Area Personnel**: When there are non-compliance issues regarding material deliveries such as: Over Shipments, Under Shipments, late deliveries, etc.

And who shall be designated hereinafter as the **issuing entity**, in relation to the internal Defective Material Reports (DMR System).
3.13.3 Quality Alert

When the data and facts of a potential quality issue with some material, or part from the supplier are not sufficient evidence to determine that a DMR shall be applied to the supplier, it is the SQE’s responsibility to notify the supplier of such finding via a Quality Alert, with the purpose of promoting preventive actions to be taken in reference to material, or stock or process parts.

It shall be the supplier’s responsibility to post such document at the work station, where the characteristic of the product is manufactured, to fully certify suspect characteristics of the part, to investigate at his plant, based on the findings and finally, give feedback to KUO Transmisiones SQE on parts condition and/or existing material at his plant.

The termination of a deeper investigation which generates sufficient objective evidence, shall determine if a DMR shall be issued to the supplier. If this is the case, the finding shall become an obvious quality issue and shall stop being a Quality Alert.

3.13.4 Issue Identification.

The DMR issuing entity shall define the Non-conformance originated by the part defect or quality issue into much detail. The following information shall be previously reviewed and verified prior to DMR issuance:

a) Part Number
b) Issue extent, which depends on the process point where the no-conformance was found:
   DASA Customer (customer assembly line or in the field), Line (assembly or machining), Receipt, Accumulated (recurrence) or Other (specify).

c) ¿Did the supplier notify KUO Transmisiones SQE of a possible Non-conformance previous to material receipt?
d) ¿Did the Non-conformance originate an internal Corrective Action Request (SAC)?
e) Quantity of suspect and/or rejected parts at DASA plant, and those in transit, etc.

3.13.5 Responsibility

The KUO Transmisiones plant shall verify that the supplier was responsible for the Non-Conformance, previously to the DMR issuance and shipment to the supplier.

The DMR issuing entity shall use the most reliable equipment, media and resources required to verify the Non-Conformance, prior to a DMR issuance; if possible, the supplier shall be contacted via telephone. Moreover, if it is necessary to accelerate the containment actions, the issuing entity shall notify the supplier via telephone to discuss the immediate actions to be taken.
Depending on the complexity of the issue analysis and its impact, the supplier shall be involved in both, the identification and verification of the Non-Conformance at the KUO Transmisiones plant facilities.

### 3.13.6 Suspect Material

It shall be the supplier’s responsibility to notify KUO Transmisiones plant SQE, on the determination to be taken regarding suspect material, whether it is to be returned to its plant, to be reworked, deviated or selected. In any case, one shall proceed as provided in section 13.17 of this procedure. Whatever the determination is, this shall be received within the next 2 hours upon DMR notification, otherwise the material shall be returned to the supplier and all costs shall be charged to his account (see 3.13.17). In the case of the material damaged during transportation, from the supplier’s plant to KUO Transmisiones plant, KUO Transmisiones shall proceed in accordance with production needs; and all the incurred costs shall be charged to the carrier.

### 3.13.7 Identification of DMR Origin and Type of Reject.

When a DMR is issued, it shall be clearly specified where the Non-Conformance was originated or detected; some areas may be:

**a) Receipt.**- Issue detected during material inspection in Quality Receipt and before sending it to the assembly line or machining.

**b) Assembly.**- This is once the material is located at the warehouse and/or the assembly line, and the issue is detected by the line operator.

**c) In Process.**- At production lines’ machining centers, during raw material processing.

**d) Accumulated.**- Scrap generated by the assembly line or machining process, due to an inconsistency or quality issue with a part or product from the supplier in a period of time.

**e) Customer.**- Issue at the customer’s assembly line or in the field. Part or material which was found defective or nonconforming in a(some) transmission(s) rejected by a KUO Transmisiones customer.

**f) Other.**- Some issue detected during a vehicle test, when there has been a previous notification of the Non-Conformance by the supplier, or other which has not been previously specified. If this option is selected, both the location and the rationale for the Non-Conformance shall be clearly specified in the DMR.

**g) Delivery Non-Compliance.**- Under and Over Shipments, Late Shipments, etc.

**h) Transportation.**- Material damaged during transportation, late deliveries, etc.

The specification of the reject origin will allow the SQE and the Buyer to measure the extent of the implications originated by the issue or non-conformance, therefore one shall proceed as per section 3.13.17.
3.13.8 Potential DMR

The SQE*, as well as Quality Receipt, shall identify a Potential DMR when the supplier has notified that he has found an inconsistency on the material shipped, or on the material ready to be shipped to the KUO Transmisiónes plant.

a) If the material has not been entered into MFG-Pro System, no DMR issuance is required.
   a.1) The supplier shall immediately replace the material. The supplier shall pay for an air freight, if KUO Transmisiónes considers it is appropriate to do so.

   a.2) In case the non-conformance, detected by the supplier, is due to a characteristic which is not impacting the Product’s operation, where such component is being assembled, the supplier may fill in a Deviation Request and send it to KUO Transmisiónes Buyer and/or SQE to be approved by KUO Transmisiónes Engineering and Quality. The supplier shall be able to ship the material once he gets the approval from KUO Transmisiónes Buyer and/or SQE via this document. The parts shall not be counted for PPM for the supplier.

   a.3) If material is requested due to assembly requirements, one shall proceed as provided in letter b) of this section.

b) If material has already been entered into MFG-Pro Systems and can be located in the Quality Receipt area, the DMR shall be issued and identified in the reject location as “Other”, and the reject details clearly described. It shall be specified that the supplier notified about the non-conformance on a timely manner.

   b.1) In case the parts may be deviated, selected at a 100%, or reworked, all costs shall be charged to the supplier.

   b.2) Only the parts which turn out as nonconforming or rejected after the determination has been made, shall be counted for PPM. The reworked or deviated quantity shall be counted for PPM, only in the case that the supplier did not notify about the issue before the material shipment.

3.13.9 Determination of Quantities for DMR.

When a DMR is issued, the issuing entity shall precisely record the quantity rejected, the quantity sampled and the quantity rejected after the disposition. The DMR System shall be capable of allowing the edition of the recorded data.

a) Quantity Rejected.- In order to determine the quantity rejected in a DMR, the Quality Receipt Insurer and/or the SQE shall identify and physically verify all suspect material with the purpose of containing the issue. During the identification of the total of material rejected, the DMR shall reference the production batch number, trial batch number, date of shipment or receipt, etc., for traceability purposes, which shall allow for the isolation of
the suspect batch, setting up the breaking point of the issue. The determination of the rejected or suspect quantity, does not exclude the quantity in transit that shall be mentioned in the DMR.

b) **Quantity Sampled.**- The Quality Receipt Insurer shall identify and verify the quantity of parts which have been sampled and/or inspected to define the non-conformance shown in the DMR. The size of the quantity sampled is defined by the Sampling Tables, which are an internal procedure that define the size of the sample to be inspected at material receipt, and are determined by the supplier performance in DMR.

c) **The Defective %** is determined by the following formula:

\[
\text{Rejected} \% = \frac{\text{Quantity Rejected}}{\text{Quantity Sampled}} \times 100
\]

d) **Quantity Rejected.**- *After Disposition.*- The Quality Receipt Insurer determines and defines the total quantity rejected after having proceeded with the type of disposition given by the supplier, which may be of the following type:

d.1) Material pickup by the supplier within the next (3) working days upon notification of issue. After this time, the KUO Transmisiones plant shall eliminate the material at its own discretion, and costs generated by this shall be charged to the supplier’s account.

d.2) Return material to supplier and charge shipment costs generated to his account. The supplier shall send a Debit Authorization Number (RMA) (Return Material Authorization).

d.3) Eliminate the material at the KUO Transmisiones plant and charge the costs generated to his account. The supplier shall send a Debit Authorization Number (RMA) (Return Material Authorization).

d.4) Inspect or Rework at KUO Transmisiones plant and/or third party supplier with the supplier’s personnel, or with KUO Transmisiones own resources (if available), charging a US$100.00 rate per man-hour. Costs generated by this shall be charged to the supplier’s account.

The quantity rejected after the first disposition, shall be counted for PPM.

### 3.13.10 Identification of Shipments Subsequent to a DMR Issuance

The issuing entity shall verify that the DMR System does not contain an open and valid DMR before issuing a new DMR. This requires that the following will be clearly defined each time a DMR is issued:

- Name and number of supplier
- Defect location
- Part number
- Description of issue or non-conformance
If the non-conformance found is the same (repetitive) as that of the previous immediate DMR and it is still open, the Quality Receipt Insurer shall include the quantity received in that DMR opened, and such part number shall be placed in Controlled Shipments Level II (See 3.14.9 and 3.14.11).

Once the issue has been reported to the supplier via DMR, the supplier shall identify the material physically, with a yellow dot on the parts, and a yellow label for the case, container or package, with the legend “100% Certified Material, EC-I”, making reference to “Controlled Shipments” procedure (see 3.14.8 and 3.14.11). The supplier shall make reference to the 8 D’s on the type of identification used. This practice shall be until the 8 D’s are closed by the SQE.

On the other hand, once the permanent Corrective Actions are implemented, the supplier shall notify KUO Transmisiones SQE using the 8D format, on the breaking point via batch number, trial batch number, date of shipment, or anything that gives an indication to KUO Transmisiones on such implementation.

3.13.11 Corrections to the DMR

If any piece of information in the DMR is not correct, the issuing entity shall ensure the necessary corrections are made on the DMR System. If the supplier complains about some information included in the DMR, the SQE shall verify the details and then correct the information, as appropriate. Any claim from the supplier in regards to the information on the DMR, shall be directly discussed with the KUO Transmisiones plant SQE responsible.

- Supplier Responsibilities

3.13.12 General Information.

The supplier shall timely notify KUO Transmisiones SQE, when a suspect or nonconforming material could have been shipped to the KUO Transmisiones plant.

When a non-conformance or non-conformity is detected by the KUO Transmisiones plant, the supplier shall get involved on the issue identification at KUO Transmisiones plant facilities, if so required by KUO Transmisiones.

3.13.13 Disposition of Suspect Material

Once the supplier has been notified and has received the DMR, the supplier shall give disposition to the suspect material in no later than 2 hours after issue notification:

1. In the DMR System, the KUO Transmisiones SQE suggests the supplier the type of disposition most suitable to issue conditions and implications. It is the supplier’s
responsibility to confirm and respond via DMR System by identifying the type of Material Disposition he wishes to give.

2. Disposition given by the supplier, shall consider material coverage at the KUO Transmisiones plant in order to prevent stoppages on the assembly or machining lines. Likewise, supplier shall consider KUO Transmisiones feasibility of having resources available, otherwise the supplier shall provide the KUO Transmisiones plant with the necessary resources for the execution of the disposition, on a timely manner.

3. If required, KUO Transmisiones shall take the right actions such as selecting, inspecting or reworking the material or parts, in order to prevent stoppages on the assembly or machining lines, until Conforming parts are received as a result from the disposition made by the supplier. These costs shall definitely be charged to the supplier and shall be shown in the corresponding DMR.

4. In case KUO Transmisiones uses its own resources for the disposition execution, the costs to supplier shall be charge at a rate of US$100.00 per man-hour plus the materials used for that same purpose.

5. In case the supplier does not respond within the following 2 working hours after the DMR has been sent, KUO Transmisiones shall take and give disposition of material, and apply the necessary charges to supplier at its own discretion, and according to what is provided in section 3.13.17

Quantity Rejected After Disposition.- The SQE determines and defines the total quantity rejected after proceeding with the type of disposition given by the supplier, which may be as follows:

a) Material Pickup by the supplier after (3) working days following the issue notification. After this time, KUO Transmisiones shall eliminate the material at his own discretion, and the expenses derived shall be charged to the supplier’s account.

b) Return material to supplier and charge him with the shipment costs generated. The supplier shall send a Debit Authorization Number (RMA) (Return Material Authorization).

c) Eliminate the material at the KUO Transmisiones plant and charge the supplier for the costs generated. The supplier shall send a Debit Authorization Number (RMA) (Return Material Authorization).

d) Inspect or Rework at KUO Transmisiones plant and/or third party supplier with the supplier’s personnel, or with KUO Transmisiones own resources (if available), charging a US$100.00 rate per man-hour. Costs generated by this shall be charged to the supplier’s account.

The quantity rejected after the first disposition shall be counted for PPM.
3.13.14 Containment Actions

Once the supplier has been notified and has received the DMR, the supplier shall implement the Containment Actions in no later than a 24-hour period of time:

1. In the DMR System, the KUO Transmisiones SQE suggests the supplier the type of disposition most suitable to issue conditions and implications. It is the supplier’s responsibility to confirm and respond via DMR System by identifying the type of Material Disposition he wishes to give.

2. Containment actions shall apply to existing material at the supplier’s plant, material in transit and material at the KUO Transmisiones plant.

3. Disposition given by the supplier shall consider material coverage at the KUO Transmisiones plant in order to prevent stoppages on the assembly or machining lines. Likewise, supplier shall consider KUO Transmisiones feasibility of having resources available, otherwise the supplier shall provide the KUO Transmisiones plant with the necessary resources for the execution of the disposition, on a timely manner.

4. If required, KUO Transmisiones shall take the right actions such as selecting, inspecting or reworking the material or parts, in order to prevent stoppages on the assembly or machining lines, until Conforming parts are received as a result from the disposition made by the supplier. These costs shall definitely be charged to the supplier and shall be shown in the corresponding DMR.

5. In case KUO Transmisiones uses its own resources for the disposition execution, the costs to supplier shall be charged at a rate of US$100.00 per man-hour plus the materials used for that same purpose.

6. The containment actions shall be provided in the DMR System in the 8 Disciplines sections (disciplines 1, 2 and 3), including the inspection analysis results from the different locations at the supplier’s plant. The breaking point for the startup of containment actions, as well as the identification method of the following batches, shall also be included in the 8 Disciplines.

7. In case the supplier does not respond within the following 2 working hours after the DMR has been sent, KUO Transmisiones shall take and give disposition of material, and apply the necessary charges to supplier at its own discretion, and according to what is provided in section 3.13.17.

3.13.15 8 Disciplines (Corrective and Preventive Actions)

The supplier shall respond to the Corrective Actions via DMR System in the 8 Disciplines format section within the following 10 calendar-days upon DMR issuance. In case the supplier needs more time, he shall request so in writing to the SQE. This final response shall include:

2. Methods used to assess effectiveness of containment actions taken.
3. Problem root cause, including the methods used to identify that(root cause(s) as technical as well systemic. **Supplier will have 5 calendar-days after notifying the quality problem to respond to KUO Transmisiones.**

4. Corrective and Preventive Actions implemented, including the rationale used to eliminate any potential failure with an error proofing / poke yoke focus.

5. Clear description of the activities to be developed such as corrective and preventive actions, showing the responsible persons and follow-up dates.

6. Definition of the assessment method for the effectiveness of actions, as well as the capability statistical studies subsequent to corrective actions implementation.

7. Show how the solution shall be institutionalized in reference to other similar parts or processes.

8. Dates on when the Failure Mode and Effects Analysis (FMEA), process sheets, inspection instructions and Control Plan, if applicable, shall be updated and be available for revision by KUO Transmisiones SQE. See FMEA and APQP Reference Manuals.

### 3.13.16 DMR Appeal Process

The supplier may appeal due to a DMR issuance or the specific information contained in the DMR. The following process shall be followed by the supplier in order to make an appeal:

1. The supplier shall submit objective evidence to the SQE in order to prove the appeal rationale. Any request to change a DMR, due to an error, shall be made within 5 working days upon DMR issuance.

2. If the SQE and the supplier do not reach an agreement, and the supplier wishes to continue with the appeal, the situation shall be turned to the KUO Transmisiones Supplier Development and Quality Engineering Manager for revision and definition of evidence.

### 3.13.17 Cost Recovery Process

The Cost Recovery Process has been implemented by KUO Transmisiones to recover the incurred costs due to a quality issue or non-conformance caused by a supplier. The Cost Recovery Process (DMR Section 3) shall be documented with all the support information related to man-hours invested, assembly or machining lines idle time and the impact on the number of transmissions. KUO Transmisiones shall provide a detailed explanation of any additional incurred cost when the Cost Recovery is sent (DMR Section 3).

1. The supplier shall be charged with a US$100.00 rate for each DMR issuance.

2. In case the KUO Transmisiones plant receives a part with a quality issue again, which has already been previously reported and that is not part of the quantity in transit in the last DMR, a US$500.00 rate shall be charged due to the issuance of a new DMR for a repetitive problem caused by customer’s negligence.

3. Costs due to rework, selection, inspection and/or process time for an internal deviation, shall be charged at a rate of US$100.00 per man-hour.
4. A rate of US$ 1000.00 shall be charged per hour (DMR Section 3) in the event of an Assembly Line Stoppage.

5. A rate of US$ 150.00 shall be charged per hour in the event of a Machining or Forging Line Stoppage.

6. Costs due to the machining and/or processing of defective parts sent by a supplier to KUO Transmisiones plant, shall be charged to the supplier.

7. Costs due to the disassembly of KUO Transmisiones transmissions and/or products, because of a quality issue on a part from the supplier, shall be charged to supplier at the man-hour cost of the assembly line, times the hours required for such disassembly, plus the materials’ costs due to such disassembly.

8. Other costs, associated to the impact of a non-conformance or quality issue from the supplier, shall be revised by the Buyer for the application of the due Cost Recovery (DMR Section 3). These costs include the following but are not limited to:
   - 8.1) Incurred expenses by KUO Transmisiones to travel to the supplier’s plant.
   - 8.2) Retribution of costs by supplier to KUO Transmisiones, due to vehicles’ disassemblies with KUO Transmisiones defective transmissions and/or products with quality issues present on the supplier’s part.
   - 8.3) If there is a quality issue with a KUO Transmisiones product, caused by a supplier’s defective part, and some customer makes charges to KUO Transmisiones, these charges shall definitely be transferred to the supplier(s) involved.

In all cases, all these charges shall be totally documented.

- Cost Recoveries (DMR Section 3) not exceeding US$ 20,000.00, when the supplier has not responded after 6 weeks, shall be charged to the supplier’s account through Accounts Payable. Cost Recoveries (DMR Section 3) equal or greater than US$20,000.00, and with no response from supplier, shall be approved by KUO Transmisiones Supplier Development and Quality Engineering Manager, as well as KUO Transmisiones Purchasing Manager, before being charged to the supplier’s account.

It is the duty of the supplier to respond in writing to any Cost Recovery (DMR Section 3) issued by KUO Transmisiones.

3.13.18 Cost Recovery Appeal Process (DMR Section 3).

The supplier may appeal due to a Cost Recovery (DMR Section 3). The process to be followed is as next described:

- The appeal process shall be concluded within 6 weeks upon Cost Recovery issuance (DMR Section 3).
- The supplier shall initiate any appeal within the first three weeks upon Cost Recovery issuance (DMR Section 3) contacting the Buyer, or the corresponding KUO Transmisiones SQE.
- The supplier shall submit objective evidence regarding an unjustified or imprecise charge. If the supplier and KUO Transmisiones reach an agreement, and the initial charge deserves to be modified, the Cost Recovery Request shall be updated, and the quantity reviewed shall be charged to the supplier.
- If there is no agreement between KUO Transmisiones and the Supplier, within the first three weeks upon Cost Recovery (DMR Section 3) issuance, the supplier shall then appeal and resort to KUO Transmisiones Supplier Development and Quality Engineering Manager and KUO Transmisiones Purchasing Manager. If a new agreement is reached between these new entities, then the modified cost shall be charged to the supplier’s account.
- If there is no agreement between the previous parties within 6 weeks, the original costs shown on the Cost Recovery (DMR Section 3), shall be charged to and discounted from the supplier’s account.

3.14 Procedure and Requirements for Controlled Shipments

3.14.1 General Information

Controlled Shipments are a requirement from KUO Transmisiones for a supplier to place a redundant quality assurance process, in order to select or inspect nonconforming material resulting from an out of control process. This redundant inspection performed at the supplier’s plant, is additional to the standard process controls. Data collected from the redundant inspection process are critical, as well as the measurement of secondary inspection processes effectiveness, and the corrective actions taken to eliminate the initial non-conformance. Controlled Shipments are a Corrective Action for the infractor supplier. This is not just a common inspection process.

There are two levels of Controlled Shipments:

3.14.1.1 Controlled Shipments Level I is defined as a redundant inspection process carried out by the supplier’s personnel at the supplier’s plant, with the aim of isolating KUO Transmisiones plant from the reception of nonconforming material and parts.

3.14.1.2 Controlled Shipments Level II is the same activity as Level I, but the entity performing the inspection is a third company selected by KUO Transmisiones and paid by the supplier. In addition, Level II activity can be required to be carried out at the supplier’s plant using his material resources, except for human resources, who will be provided by the service supplier assigned by KUO Transmisiones. In special cases, KUO Transmisiones will lend its facilities to the service supplier in order to carry out the inspection using his own human and technical resources.

The key points in this process are:
3.14.2 Consensus among SQE, SDE and KUO Transmisiones buyer on the current supplier’s controls are not robust enough to isolate KUO Transmisiones Plant from receiving nonconforming parts or material.

3.14.3 Formal communication with the supplier about the action (Level I or Level II) to be taken, including the outcome or termination criterion of this condition.

3.14.4 If it is Level II, an initial meeting with the supplier shall be required at KUO Transmisiones Plant facilities and/or conference call between KUO Transmisiones and the supplier, in order to broadly explain the supplier about the requirements and responsibilities that both parts shall adopt.

3.14.5 If it is Level II, a detailed definition shall be required for a specific inspection area, in case the process is carried out at the supplier’s plant.

3.14.6 A revision of the containment action is required regarding the Controlled Shipment Level.

3.14.7 Controlled Shipments: ¿Level I or Level II?

The standard rule to determine the implementation of Controlled Shipments can consider one or several of the following:

a) DMR issuance
b) Repetitive DMR
c) PPM performance
d) Issue impact and duration
e) Non-robust and incapable of producing quality parts processes
f) Field issue
g) Inadequate containment and/or solution of non-conformances via the DMR process.

Based on the previous considerations, KUO Transmisiones decides if the supplier shall be penalized with a Level I or Level II. In order to make such a decision, the assessment team shall be conformed by the corresponding team of Direct Material Purchases (SQE, SDE and buyer), the Quality Assurance Manager of KUO Transmisiones Plant, the Quality Engineering and Supplier Development Manager and KUO Transmisiones Purchasing Manager. Controlled Shipments Level II is characterized by situations, where the previous actions implemented by the supplier have shown and proved to be ineffective, and that they have the prevailing need of outsourcing (third party) to perform such required inspection, thus assuring KUO Transmisiones the non-reception of nonconforming parts from the supplier.

3.14.8 Controlled Shipments Level I

Every DMR issued to the supplier places the part number and the supplier itself in the Controlled Shipments Level I Status. KUO Transmisiones SQE communicates to the supplier, in writing, the definition of the issue, the need of the implementation of an additional and redundant inspection, the containment activities and the criterion to terminate the
Controlled Shipments Level I condition. This Controlled Shipments Level I procedure may be substituted by the “Pre-production Containment Procedure” (refer to requirement 3.6)

**It shall be the supplier’s responsibility to:**

3.14.8.1 Immediately establish an inspection area at his plant.
3.14.8.2 Begin the inspection activities and deploy the results in a public and visible area in the company.
3.14.8.3 Track and locate the previous points in the process, where the nonconforming material shall be or shall have been detected.
3.14.8.4 The leadership team of the supplier shall meet on a daily basis in the selected inspection area, to check the results and ensure that the corrective actions taken are being effective, or that a change is required.
3.14.8.5 Communicate the results in writing on a daily basis regarding the inspection process to the KUO Transmisiones SQE.
3.14.8.6 Request the termination of the Controlled Shipments process by sending the documentation on the performance and results to the KUO Transmisiones SQE, provided that 2 weeks after the last corrective action implementation, the issue has already been eradicated.

It shall be responsibility of KUO Transmisiones SQE to assess and ensure that the criterion to change the Controlled Shipments condition shall be communicated, in writing, to all the affected entities in KUO Transmisiones implying thus, the release of the supplier from this status.

The supplier shall comply with the following requirements for the Containment Actions in Controlled Shipments Level I.

3.14.8.7 The inspection area shall be highly visible and appropriately lightened, equipped, etc.
3.14.8.8 It shall have a very well defined and efficient material flow, including clearly identified areas for the inflow and outflow of material from this area.
3.14.8.9 No type of rework or material recovery shall be done in this area.
3.14.8.10 The inspection area shall be independent from the supplier’s production process.
3.14.8.11 The non-conformances, measurements, results and actions taken in reference to the containment activity, shall be clearly deployed on the information boards.
3.14.8.12 The charts and results shall be updated and reviewed on a daily basis by the supplier’s leadership team.
3.14.8.13 Solutions to issues found shall be clearly analyzed and documented with objective evidence.
3.14.8.14 The inspectors designated to perform the containment inspection shall have the corresponding work instructions, quality standards and/ or acceptance samples available.
3.14.8.15 Designated inspectors shall be previously trained.
### 3.14.9 Controlled Shipments Level II

The following are specific requirements for Controlled Shipments Level II:

The SQE communicates and describes to the supplier, in writing, the following:

- The action to be taken and executed.
- The Non-conformance driving to such decision.
- The type of inspection required
- The criteria to be covered in order to leave the Level II condition
- The request to state a date and to carry out an initial meeting between KUO Transmisiones and the supplier at KUO Transmisiones facilities. The SQE, SDE, Buyer, Quality and Supplier Development Engineering Manager, Purchase Manager from KUO Transmisiones and The Supplier’s Quality Manager shall attend the meeting as a minimum.
- It shall be the supplier’s responsibility to complete the answer format to confirm Controlled Shipments II and return it to the KUO Transmisiones SQE.

The initial meeting, if required, shall meet the following steps:

#### 3.14.9.1 Describe the objective of the meeting, such as:

KUO Transmisiones has determined that Controlled Shipments Level II is being implemented at its plant.

The production process is out of control and the Nonconforming parts and material shall be isolated.

#### 3.14.9.2 The agenda of the meeting shall include:

- Revision of the process flowchart
- Issue description
- Definition of activities and responsibilities
- Set the details for the Controlled Shipments II Plan.
- Define the criteria to terminate and leave the Controlled Shipments II condition.
- Define the means and plan of communication.

#### 3.14.9.3 Activities and Responsibilities:

**SQE and SDE:**

- Participate in the decision about which outside company or third party shall carry out the activities required for Controlled Shipments Level II.
- Define the dimensions, specifications, characteristics, etc to be inspected.
- Decide about the definition of the criterion to leave the condition of Controlled Shipments II.
- Drive the implemented activities in the whole process.
Buyer:
- Assume responsibility for all the commercial and financial affairs resulting from the Controlled Shipments II process.
- Shall participate in the decision about which outside company or third party shall carry out the activities required for Controlled Shipments Level II.

Outside Company for Level II (third party)
- Provide personnel to carry out and perform the inspection activity and results record.
- Provide documentation to the supplier and to the KUO Transmisiones SQE about the progress and results of activities in Controlled Shipments II.
- Certify the material in accordance with the agreement between the KUO Transmisiones SQE and the supplier.
- Place Label of Controlled Shipments Level II.

Supplier:
- Issue a Purchase Order to the Outside Company for Level II. The supplier shall be responsible for all the costs generated by the hired Outside Company, which shall carry out the containment activities and/ or shall supervise the plant’s employees at the supplier’s plant.
- Provide an adequate space, equipment and necessary tools in order to perform the re-inspection activity.
- Drive the Permanent Corrective Actions.

3.14.10 Specific Containment Requirements for Controlled Shipments.

The information boards shall deploy the following information:
- Quality and acceptance standards such as master samples, technical specifications, drawings, etc.
- Action plans based on the non-conformances found
- Process Control Plan identified, where the non-conformances occurred.
- Work Instructions for operators and/or designated inspectors.
- Charts showing the number of inconsistencies found, PPM, DMR, etc.
- Quality Charts with trends, if possible, for the Statistical Process Control Charts.

The Communication Plan shall include:
- The means, format and frequency of communication from the supplier to KUO Transmisiones SQE.
- The report of all the issues or non-conformances found during the inspection process derived from the condition of Controlled Shipments Level II.
- Assure to maintain the same criterion of termination for Level II

The termination criterion shall:

- Include clear and measurable elements
- Shall be specific, relevant and focused on non-conformances or quality issues previously detected.
- Include a program to assure that the corrective actions implemented are permanent.

3.14.11 Specific Application Requirements for Controlled Shipments Level I and II

- CONTROLLED SHIPMENTS LEVEL I:

It is the Supplier’s Responsibility:

3.14.11.1 To inspect at a 100% the characteristic that was found out of specification for the defective part number, and all the part numbers that have a similar manufacturing process, namely, those which are manufactured in the same machine and/or have the same manufacturing concept. KUO Transmisiones SQE together with the supplier, shall decide which part numbers are implied.

3.14.11.2 All the certified parts shall be identified with a yellow dot.

3.14.11.3 All the cases or bags where the certified material is packed shall be identified with a yellow label which reads: “100% Certified Material CS-I”

3.14.11.4 Periodic feedback to the KUO Transmisiones SQE about the performance of the 100% certification results. (Acceptance and rejection percentage).

3.14.11.5 Comply with all the events of the 8 D’s process and all the activities involved.

3.14.11.6 The supplier’s plant Quality Assurance Manager as well as the General Manager, shall submit a complete report of the 8 D’s per quality issue during the next 15 working days upon DMR issuance

All these activities shall be kept until the 8 D’s report is closed by the KUO Transmisiones SQE.

Failure to comply with any of the above mentioned activities shall cause the supplier to be placed in “Controlled Shipments Level II”. Some of the reasons for this are:
3.14.11.7 If KUO Transmisiones finds in some of its facilities a repetitive issue: same defect in the same part number or any other in a different part number with a similar supplier’s manufacturing process.

3.14.11.8 Non-Compliance to material identification requirements for the next shipments after the issuance of the DMR.

3.14.11.9 Non-Compliance to the tracking of events of the 8 D’s process.

3.14.11.10 If any part number provided by the supplier to KUO Transmisiones, results in a claim from a KUO Transmisiones customer.

- CONTROLLED SHIPMENTS LEVELII:

It is the Supplier’s Responsibility:

3.14.11.11 200% Material certification in the defect found. The first 100% inspection shall be done by the material supplier, and the second 100% inspection can be performed at:

a) The Material Supplier’s Plant using his own resources (facilities, gages, etc.) using a Third Party Supplier defined by KUO Transmisiones, to perform the second 100% certification before being shipped to KUO Transmisiones. The Inspection cost shall be agreed upon between the Third Party Supplier and the Material Supplier. The material supplier shall pay the total cost.

b) The Facilities of the Third Party Supplier defined by KUO Transmisiones, using his own resources in order to carry out a second 100% certification before being shipped to KUO Transmisiones. The cost shall be agreed upon between both suppliers, and the material supplier shall pay the total inspection cost.

c) KUO Transmisiones Plant, using a third party supplier defined by KUO Transmisiones, with an inspection cost of $100.00 USD per man hour, and the total cost shall be paid by the material supplier.

3.14.11.12 All the parts shall be identified with a blue dot by the material supplier, and a green dot by the Third Party Supplier.

3.14.11.13 All the cases or bags where the certified material is packed shall be identified with a green label reading “100% Certified Material CS-II” This activity shall be carried out by the Third Party Supplier.

3.14.11.14 Periodic feedback to the KUO Transmisiones SQE about the performance and inspection results of the 200%. Acceptance and rejection percentage
3.14.11.15 Comply with all the events of the 8 D’s process and all the implied activities.

3.14.11.16 The General Director, General Manager and Quality Manager shall attend to KUO Transmisiones Plant with the SQE, the respective team from KUO Transmisiones and the Third Party Supplier, during the following three working days after the issue has been notified by the SQE, which aim is to discuss the rationale used for such decision and to formalize the agreements regarding the termination criterion and the development and execution of the Procedure of Controlled Shipments Level II.

3.14.11.17 Same people on behalf of the material supplier (General Director, General Manager and Quality Manager) shall submit the 8D’s Complete Report about the quality issue solution within a span of no more than 15 working days after the Procedure for Controlled Shipments Level II has been formalized.

3.14.11.18 While the material supplier is in the Controlled Shipments Level II status, he shall be placed in “NEW BUSINESS HOLD” until he leaves such status and the 8D’s report is closed by the KUO Transmisiones SQE.

The material supplier shall continue all the activities until the 8D’s report is closed by the KUO Transmisiones SQE.

Failure to comply with any of the above mentioned activities, shall cause the material supplier to be replaced and deleted from the “KUO Transmisiones Approved Suppliers List”.

3.15 Supplier’s Global Performance Monitoring

3.15.1 General Information

The means to monitor the global performance of the supplier are defined in this section, through the use of data generated by the behavior of the supplier in quality, deliveries and competitiveness. All of these criteria will be clearly detailed below.

3.15.2 Line Stoppage

Based on the impact resulting from a non-conformance or a non-conforming part or material from the supplier, the following classification has been determined:

Note 1: The number of line Stoppages induced by the supplier at KUO Transmisiones, is the most important measurement in order to measure the quality performance of a supplier. This measurement is used to enable KUO Transmisiones Purchases to grant or increase business with the supplier.
**Note 2:** A line Stoppage implies that several areas within KUO Transmisiones, such as Product Engineering, Manufacture, Production Quality and Control, shall get involved in the problem with the aim of taking the necessary actions to enable the assembly line to continue operating.

### 3.15.2.1 Line Major Stoppage

A line stoppage classified as Major is one in which the quality issue, regarding the nonconforming part or product and the non-conformance, requires a KUO Transmisiones Product replacement at KUO Transmisiones customer plant; parts in transit, in shipments and obviously those that are being assembled or are scheduled to be assembled. This includes the material or product in the warehouses and/or Quality Receipt. The supplier shall involve the leadership team of his plant, which is mainly conformed by the Manufacturing Manager, Plant Manager, Quality Manager, Production Control and/or Production Manager, etc.

The costs incurred as a result of a Line Major Stoppage, shall be recorded and addressed in the corresponding DMR, and per definition in section 3.13.17 of this procedure.

### 3.15.2.2 Assembly and/or Process Line Stoppage

A line stoppage classified as Assembly and/or Process is a quality issue, of the nonconforming part or product, or the non-conformance, that has been found during the assembly and/or process in any of the lines and which has impacted the operation flow for 5 or more minutes. The part’s quality issue shall require the replacement of the product provided by the supplier. This includes the material or product in warehouses and/or quality receipt. The supplier shall involve the leadership team of his plant, which is mainly integrated by the Manufacturing Manager, Plant Manager, Quality Manager, Production Control and/or Production Manager, etc., in order to solve the quality issue and address the costs incurred due to such event.

The costs incurred as a result of an Assembly and/or Process Line Stoppage shall be recorded and addressed in the corresponding DMR (Cost Recovery – Section 3) and per definition in section 3.13.17 of this procedure.

### 3.15.3 Supplier Quality Performance Assessment (40% of the total rating)

KUO Transmisiones updates in a monthly basis the assessment of the quality performance of the supplier base conforming to the following parameters and criteria:
3.15.3.1 PPM of Disassembly Performance:

PPM rating that supplier has had by month in the assembly process. This entry has a value of 20% of the total amount of the parameters rated in the quality criteria.

\[
PPM_{FTQ} = 1 - \left( \frac{PPM_{Goal} - PPM_{Goal}}{PPM_{Real}} \right) \times (20\%); \quad \text{if } PPM_{Real} \leq PPM_{Goal}, \text{ then } PPM_{FTQ} = 20\%
\]

Where: \[
PPM_{Real} = \left( \frac{Total \ Quantity \ Rejected}{Total \ Quantity \ Assembled} \right) \times (10^6)
\]

\[PPM_{Goal} = \text{Value of PPM defined by KUO Transmisiones plant for this process}\]

3.15.3.2 PPM of Manufacturing Processes Performance:

PPM rating that supplier has had by month in the internal manufacturing processes in the KUO Transmisiones plant. This parameter is different to the PPM ratings of the assembly and incoming processes. This entry has a value of 12% of the total amount of the parameters rated in the quality criteria.

\[
PPM_{PROC.} = 1 - \left( \frac{PPM_{Real} - PPM_{Goal}}{PPM_{Real}} \right) \times (12\%); \quad \text{if } PPM_{Real} \leq PPM_{Goal}, \text{ then } PPM_{PROC.} = 12\%
\]

Where: \[
PPM_{Real} = \left( \frac{Total \ Quantity \ Rejected}{Total \ Quantity \ Machined} \right) \times (10^6)
\]

\[PPM_{Goal} = \text{Value of PPM defined by KUO Transmisiones plant for this process}\]
3.15.3.3 PPM Incoming Area Performance:

PPM rating that supplier has had by month in the incoming area in the KUO Transmisiones plant. This parameter is different to the PPM ratings of the assembly and manufacturing processes. This entry has a value of 8% of the total amount of the parameters rated in the quality criteria.

\[
PPM_{REC} = \left[ 1 - \left( \frac{PPM_{Real} - PPM_{Goal}}{PPM_{Real}} \right) \right] (8\%) \; ; \; \text{If} \; PPM_{Real} \leq PPM_{Goal}, \; \text{then} \; PPM_{REC} = 8\%
\]

Where: \(PPM_{Real} = \left( \frac{Total \; Quantity \; Rejected}{Total \; Quantity \; Received} \right) \times 10^6\)

\[PPM_{Goal} = \text{Value of Worldwide PPM Benchmark of the Commodity}\]

3.15.3.4 Complaints of External Customers of KUO Transmisiones Plant Performance:

Rating of the events where supplier has participated with quality issues with external customers of KUO Transmisiones. At the moment that supplier has an incident, automatically; supplier is located in a “RED” status. This entry has a value of 10% of the total amount of the parameters rated in the quality criteria.

3.15.3.5 Problems Solution (8D’s) Performance:

Rating of the effectiveness in the responses to the quality problems issued by KUO Transmisiones plant, as well, the response time. This entry has a value of 30% of the total amount of the parameters rated in the quality criteria.

\[
Response \; to \; the \; Quality \; Issues \; on \; Time \; (RPC_t) = \left[ 1 - \left( \frac{DMR_{Issued} - DMR_{Response \; on \; Time}}{DMR_{Issued}} \right) \right] (15\%)
\]

If \(DMR_{Response \; on \; Time} = DMR_{Issued}, \) Then \(RPC_t = 15\%\)

\[
Response \; to \; the \; Quality \; Issues \; in \; Effectiveness \; (RPC_e) = \left( \frac{DMR_{Response} - DMR_{Rejicted}}{DMR_{Response}} \right) (15\%)
\]
If \( \text{DMR}_{\text{Response}} = \text{DMR}_{\text{Rejected}} \), Then \( \text{RPC}_e = 0\% \); Also if \( \text{DMR}_{\text{Issued}} = 0 \), then \( \text{RPC} = \text{RPC}_t + \text{RPC}_e = 30\% \)

3.15.3.6 PPAP Submissions Performance (PPAP’s):

Rating in performance in PPAP submissions as new submission as well annual layouts (revalidations) according to the timing agreed upon between supplier and SDE of KUO facility. Also, it is rating the effectiveness in the accomplishment to the quality and design requirements. This entry has a value of 20\% of the total amount of parameters rating in the quality criteria.

\[
\text{Performance in PPAP submissions versus schedule} \quad (CV_{p}) = \left[ 1 - \left( \frac{\text{PPAP}_{\text{Scheduled}} - \text{PPAP}_{\text{Received}}}{\text{PPAP}_{\text{Scheduled}}} \right) \right] (10\%)
\]

if \( \text{PPAP}_{\text{Scheduled}} \leq \text{PPAP}_{\text{Received}} \), then Performance in PPAP submissions versus Schedule \((CV_{p})= 10\%\)

\[
\text{Effectiveness in PPAP Submissions} \quad (CV_{e}) = \left( \frac{\text{PPAP}_{\text{Received}} - \text{PPAP}_{\text{Rejected}}}{\text{PPAP}_{\text{Received}}} \right) (10\%)
\]

if \( \text{PPAP}_{\text{Received}} = \text{PPAP}_{\text{Rejected}} \), then the Effectiveness in PPAP Submissions = 0\%; also if \( \text{PPAP}_{\text{Scheduled}} = 0 \), then Performance in PPAP submissions = \( CV_{p} + CV_{e} = 20\% \)

3.15.4 Supplier Delivery Performance Assessment (30\% of the total rating)

KUO Transmisiones updates in a monthly basis the assessment of the delivery performance of the supplier base conforming to the following parameters and criteria:

- Delivery Accomplishment (40\%)
- Flexibility in Production Schedule Changes (20\%)
- Extra freights under supplier responsibility (40\%)

3.15.4.1 Delivery Performance:

Rating the percentage of performance in delivery conforming releases (ERP) of the KUO facility. Se califica el porcentaje de cumplimiento en entregas conforme a los releases (ERP) de la planta de KUO Transmisiones. This entry has a value of 40\% of the total amount of parameters rating in delivery.
\[ \text{Delivery Performance} = \left( 1 - \frac{\text{Quantity}_{\text{Scheduled}} - \text{Quantity}_{\text{Received}}}{\text{Quantity}_{\text{Scheduled}}} \right) \times 40\% \]

If the received quantity is < or > than scheduled quantity is equally sanctioned.

If the Received Quantity = Scheduled Quantity then Delivery Performance = 40%

3.15.4.2 Performance in Flexibility in Schedule Changes (Service):

Rating the flexibility that supplier has to abrupt changes in scheduling that prior were not planned. However, they are from a market fluctuations that are not controlled by KUO facility. This entry has a value of 20% of the total amount of parameters of delivery criteria and it is rated subjectively using the criteria of the representative of the purchasing planner of KUO Facility.

Positive Response to the Schedule Change = 20%
Negative Response to the Schedule Change = 0%

3.15.4.3 Performance in Extra Freights under Supplier Responsibility:

Rating the number of incurrance in Extra Freights that supplier has caused to the KUO facility and there is enough evidence for cost recovery by KUO facility. This entry has a value of 40% of the total amount of parameters of delivery criteria.

\[ \text{Extra Freights} = \left( \frac{\text{Total Shipments} - \text{Total Extra Freights}}{\text{Total Shipments}} \right) \times 40\% \]

3.15.5 Supplier Global Competitiveness Performance Assessment (30% of the total rating)

KUO Transmisiones measures the competitiveness level of his supplier base conforming to the following parameters and criteria:
- Price Reduction Plans (50%)
- Quotation & Feasibility Response (20%)
- Competitiveness for New Business (30%)

3.15.5.1 Performance in Price Reductions Plans by Supplier:
Rating of the performance that supplier has had in price reductions or increasings where the goal is to have price reductions to keep the competitiveness level with our customers. These reductions could be, by:

- Negotiation
- Improvements in Productivity in the Manufacturing processes of the piece.
- Design Changes as:
  - Material Change
  - Manufacturing Process Change
  - Tolerance Change, etc.

Whatever these initiatives of price reductions is valid. This entry has a value of 50% of the total amount of parameters of the Competitiveness criteria.

- Increase of the year? Yes (0%) No (25%)
- % Price Reduction (vs. Global Amount of Purchasing): 1% (=5%), 2% (=10%), 3% (=15%), 4% (=20%), >4% (=25%)

### 3.15.5.2 Performance in RFQ’s Response and Feasibility Accomplishment:

Rating the supplier performance in response to the RFQ’s (Request For Quotations) on time and “clarity” in the operations costing in the piece manufacturing. Furthermore, the supplier is invited to make a right revision and filled out of the feasibility analysis in each RFQ. This entry has a value of 20% of the total amount of parameters in competitiveness criteria

\[
RFQ\ Response(RFQ) = \left[1 - \left(\frac{\# RFQ\ Sent - \# Quotations\ Received\ on\ Time}{\# RFQ\ Sent}\right)\right] (10\%)
\]

* If the quotation was received without feasibility analysis or filled out wrongly, the quotation is considered not sent

In each quotation must be sent the cost breakdown and it adds 10% on this rate.
3.15.5.3 Performance in Competitiveness:

Rating that supplier has won in new business with respect to the projects have been quoted with him and where the project was a fact to be purchased by KUO facility. This entry has a value of 30% of the total amount of parameters of global competitiveness criteria.

\[
Competitiveness = 1 - \left( \frac{\text{#Quoted Drawings & Released} - \text{#Allocated Purchase Orders}}{\text{#Quoted Drawings & Released}} \right) \times (30\%)
\]

3.15.6 Supplier Global Performance Assessment

The following addition is made: Quality + Delivery + Global Competitiveness = Total. Depending on the result of this equation, the supplier is classified within the following criteria:

- **“GREEN/VERDE Supplier**
  - 80% ≤ Total ≤ 100%

- **“YELLOW/AMARILLO” Supplier**
  - 70% ≤ Total < 80%

- **“RED/ROJO” Supplier**
  - Total < 70% or having at least one Incidence in issues with external customers.

- **“WHITE/BLANCO” Supplier**
  - INACTIVE Supplier that has not had entries during the evaluation process

Once the suppliers have been assessed, all the “RED” and “YELLOW” ones are identified, and the SDE performs an analysis in order to know why they fell into that classification, and gives feedback to the suppliers regarding their status

3.15.6.1 The supplier shall send to the SDE an improvement plan where it shows specific actions to be implemented in the supplier’s process in order to eradicate the quality issue from the root.

3.15.6.2 The KUO SDE, together with the SQE, shall assess the effectiveness of the actions, whose revision frequency shall depend on the monthly actions and monitoring of the
supplier’s quality performance, in order to watch the improvement trends. Otherwise, the SDE and the SQE shall define the new strategy to be followed with the infractor supplier.

3.15.6.3 The SDE posts the “RED” suppliers assessment results, as well as the quality performance charts at KUO’s “War- Room”. Such suppliers are considered as the worst KUO suppliers, and shall not be taken into consideration for new business until they migrate to the “GREEN” status.

3.15.6.4 Frequency of the Controlled Shipments condition.

KUO tabulates the number of times that the supplier has been placed in the Controlled Shipments Status, Level I or Level II, throughout the last 12 months. This indicator also determines the supplier’s quality behavior, reflected in KUO’s Suppliers Portfolio, and decides on the opportunity for the supplier to receive new purchase orders, or to participate in new projects.

3.16 Requirements for Tooling Identification, Inspection and Testing Devices, Owned by KUO or KUO’s Customers

If the tooling (matrixes, molds, dies, prickers, centers, etc.), the manufacturing and/or assembly mountings and/or Inspection or Testing devices owned by KUO, are guarded by a supplier, the latter shall meet the following requirements:

3.16.1 Identify, in a visible and permanent way, the tooling and/or equipment with the legend “Owned by KUO and the plant to which it belongs”.
3.16.2 Protect against potential damages and deterioration during transport and storage.
3.16.3 In the case of tooling, keep the original conditions according to its initial validation in order to guarantee quality of the product through periodic maintenance programs, Checklist, dimensional report in each assembly against product specification etc. Report to KUO buyer, in writing, the conditions and remaining life estimated for the parts, every 3, 6 or 12 months according to the process where the tooling is used and/or the agreement made with the SDE/ KUO’s Buyer. Refer to Item 7.5.1.5 of the ISO/TS-16949 Technical Standard.
3.16.4 For the Inspection and/or Testing Assemblies, these require to be controlled according to Item 7.6 of the ISO/TS-16949 Technical Standard
3.16.5 For identification of tooling property of KUO’s Customers, must be followed the next identification instructions:

3.16.5.1 Tooling Property of General Motors Company

3.16.5.1.1 It is responsibility of KUO Project Manager fills out the form “Tooling Worksheet” with the following information:

<table>
<thead>
<tr>
<th>3.16.5.1.1.1</th>
<th>Program/Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.16.5.1.1.2</td>
<td>GM PO/Contract Number</td>
</tr>
<tr>
<td>3.16.5.1.1.3</td>
<td>KUO facility assembly part number</td>
</tr>
<tr>
<td>3.16.5.1.1.4</td>
<td>KUO facility component part number</td>
</tr>
</tbody>
</table>
3.16.5.1.1.5 VTAM Tool ID number for each tooling conforming KUO Purchase Order
3.16.5.1.1.6 KUO Customer Part Number

Note: A Tooling Worksheet Form must be issued for each VTAM Number

3.16.5.1.2 It is responsibility of the supplier the fill out of the points 2, 3, 4, 5, 6, 7, 8, 9, 10 of the “Tooling Worksheet Form”
3.16.5.1.3 It is responsibility of the KUO buyer sends official ID plates to suppliers with the legend “Property of General Motors”

3.16.5.1.4 It is responsibility of the supplier to mark the ID plates using permanent marks as stamping, Laser Etch, engraving, etc. Use of permanent ink or using superficial electric pencil is not allowed. The marking in the ID plates must have the following information:
3.16.5.1.4.1 Tool Number: VTAM Tool ID
3.16.5.1.4.2 Part Name: Description of the KUO part (when it applies)
3.16.5.1.4.3 Part Number: KUO Part Number (when it applies)
3.16.5.1.5 Location of the ID plate must be in a visible place of the tooling. For tooling GM property where the ID plate is not possible to put in it for type of material, function of the piece, size, etc., it must be riveted or turned in the box or packaging of the tool and 2 pictures must be sent:

3.16.5.1.5.1 First one; zoom-in showing the ID plate with related data. Name of the file (picture) using the VTAM Number plus word “Close Up”. Example: 79134-1-A Close Up. Type of file must be in JPEG no bigger than 200Kb.

3.16.5.1.5.2 Second one; making a zoom-out showing the complete tooling and the ID plate location of the VTAM number, as showed in image a), in the case of box is plastic, see image b), if box is wood, see image c). Name of the file (picture) using the VTAM Number plus the word “Complete”. Example: 79134-1-A Complete. Type of file must be in JPEG no bigger than 200Kb.
3.16.5.1.5.6 For tooling where it is possible to rivet or turn the ID plate with the legend of Property of General Motors. Two pictures must be sent:

3.16.5.1.5.6.1 First one; zoom-in showing the ID plate with related data. Name of the file (picture) using the VTAM Number plus word “Close Up”. Example: 33551-2-A Close Up. Type of file must be in JPEG no bigger than 200Kb.
3.16.5.1.5.6.2 Second one: making a zoom-out showing the complete tooling and the ID plate location of the VTAM number, as showed in image. Name of the file (picture) using the VTAM Number plus the word “Complete”. Example: 33551-2-A Complete. Type of file must be in JPEG no bigger than 200Kb.

3.16.5.1.6 Make an electronic file including:
3.16.5.1.6.1 The two pictures as previously explained
3.16.5.1.6.2 The Tooling Worksheet Form completely Filled out.

Note: Supplier must send the electronic file to the KUO buyer by e-mail for validation of the information.

3.16.5.1.7 It is responsibility of the supplier to send all this information in the PPAP documentation to the KUO Purchasing Team. If these tooling requirements are not
received in the PPAP documentation, PSW will not be approved by KUO Engineering and tooling payment to the supplier will be delayed.

3.16.5.2 Tooling Property of Ford Motors Company
3.16.5.2.1 It is responsibility of the supplier submit the cost breakdown with detailed information of the tooling; type, description, quantity, cost, etc.
3.16.5.2.2 It is responsibility of the KUO buyer to submit the Tooling ID conforming to the “example of proper tool tag” to the supplier.

**Example of Proper Tool Tag**

![Example of Proper Tool Tag Diagram](image)

Note: TO Serial Number should correspond with Line Item

3.16.5.2.3 It is responsibility of the supplier to engrave the tooling of Ford Motors Co. property conforming following instructions:
   3.16.5.2.3.1 Engrave the Tool ID supplied by KUO buyer using laser etch or electric pencil as showed in image a) or
3.16.5.2.3.2 Use a steel ID where the Tool ID is described. The engrave must be permanent. The Tool ID Tag must be located in a visible zone of the tooling. See image b)
3.16.5.2.3.3 For tooling property of customer where the Tool ID tag is not possible to put in due to type of material, function of the part, size, etc., supplier must take an individual picture where the complete tooling is showed and submit an explanation to the KUO buyer via e-mail of the tooling characteristics associated with the Tool ID of the paragraph 3.16.5.2.2

3.16.5.2.3.4 It is responsibility of the supplier to create an electronic file including:
- 3.16.5.2.3.4.1 Pictures according to 3.16.5.2.2
- 3.16.5.2.3.4.2 Tooling invoices with detailed description

3.16.5.2.4 It is responsibility of the supplier to send all this information in the PPAP documentation to the KUO Purchasing Team. If these tooling requirements are not received in the PPAP documentation, PSW will not be approved by KUO Engineering and tooling payment to the supplier will be delayed.

3.16.5.3 Tooling Property of DCC (Chrysler)

3.16.5.3.1 It is responsibility of KUO Project Manager fills out the form “Tooling Worksheet” with the following information:
- 3.16.5.3.1.1 Program/Project
- 3.16.5.3.1.2 Customer PO/Contract Number
- 3.16.5.3.1.3 Customer Assembly Part Number
- 3.16.5.3.1.4 KUO facility component part number
- 3.16.5.3.1.5 Tool ID number for each tooling conforming KUO Purchase Order
- 3.16.5.3.1.6 KUO Customer Part Number

Note: A Tooling Worksheet Form must be issued for each Tool ID Number

3.16.5.3.2 It is responsibility of the supplier the fill out the points 2, 3, 4, 5, 6, 7, 8, 9, 10 of the “Tooling Worksheet Form”

3.16.5.3.3 It is responsibility of the supplier to mark the Tool ID using permanent marks as stamping, Laser Etch, engraving, etc. Use of permanent ink is not allowed. The marking must have the following information:
- 3.16.5.3.3.1 Legend: “Property of Chrysler”
- 3.16.5.3.3.2 Tool Identification Number: Tool ID (supplied by KUO buyer)
- 3.16.5.3.3.3 Customer Part Description

Note: The marked must be engraved under relief or stamped. If the tooling is used to produce two or more part numbers of Chrysler, it must be specified in the engraving as showed in image a) and b).
1. Property tag (Tool identification) include:
   a. “Property of Chrysler”
   b. “Tool Identification #”
   c. “Part Description”

2. Property tags are permanently marked on the tool via etching, embossing or stamping.

3. **NOT** acceptable as permanent mark:
   stenciling, painting, inking, riveting, gluing and welding ID tags

Note: Refer Appendix - x for TPO Clause #014

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**Image a)**

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**Image b)**

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**3.16.5.3.4** For tooling property of customer where the Tool ID tag is not possible to put in it due to type of material, function of the part, size, etc., supplier must rivet or turn in the box or original package. Supplier must take and send two pictures of the tooling:

**3.16.5.3.4.1** First one: zoom-in showing the ID plate with related data. Name of the file (picture) using the Tool ID Number plus word “Close Up”. Example: D-010-01 Close up. Type of file must be in JPEG no bigger than 200Kb.
3.16.5.3.4.2 Second one; making a zoom- out showing the complete tooling and the ID plate location of the Tool ID Number, as showed in images. Name of the file (picture) using the Tool ID Number plus the word “Complete”. Example: D-010-01 Complete. Type of file must be in JPEG no bigger than 200Kb.
3.16.5.3.5 Make an electronic file including:
3.16.5.3.5.1 The two pictures as previously explained
3.16.5.3.5.2 The Tooling Worksheet Form completely filled out.

Note: Supplier must send the electronic file to the KUO buyer by e-mail for validation of the information.

3.16.5.3.6 It is responsibility of the supplier to send all this information in the PPAP documentation to the KUO Purchasing Team. If these tooling requirements are not received in the PPAP documentation, PSW will not be approved by KUO Engineering and tooling payment to the supplier will be delayed.

3.17 GLOBAL TOOLING GUIDELINES AND PAYMENT RESPONSIBILITY MATRIX

The purpose of this document is to set forth guidelines to assist the supplier’s understanding of KUO policy, objectives and procedures with regard to KUO facility-owned special tooling located at Supplier’s facility (ies), Machinery and Equipment (M&E), whether dedicated or non-dedicated, including, but not limited to, stamping presses, weld presses (all variations), indexing machines, CNC machines, automated transfer, robots, handling systems or computer/CAD stations, tool room equipment, and lab equipment are not special tooling. This also includes equipment where it may be necessary to alter uniquely in order to manufacture the necessary KUO part. In addition, there may be items that may fall into a suppliers definition of tooling but, are not items that KUO chooses to own at a suppliers site. The utilization cost of these items are assumed to be included in the vendor’s burden portion of the piece price, they will not be reimbursed by KUO facility as special tools. The fact that M&E may have been in a KUO tooling purchase order in the past is not relevant nor does it set precedent for how we manage our business today.

3.17.1 Special Tooling Guidelines and Definitions

The following summarizes KUO's processes with respect to special tooling and KUO authorized engineering changes to such tooling. It is the responsibility of Tier 2 supplier to ensure its sub-suppliers comply with these guidelines.

- Special tooling is tooling specifically designated for the production of, and is unique to, a KUO part.
- Generic tooling, general-purpose items and equipment are excluded, even if these items are dedicated to the KUO part (i.e., fasteners, drills, etc.). Refer to further matrix for general clarification.
- Unique computer software required directly for the production or gauging of the part is considered part of special tooling and shall become the property of KUO or their customers. Computer hardware is considered supplier-owned equipment.
• In some cases, tooling may need to be relocated from one supplier to another. During any such tool move, the original supplier is required to keep the tooling in PPAP approved condition. If KUO requests the tool move, the cost(s) of tool modifications required by new supplier may be covered by KUO facility via Tooling Contract(s). If the new supplier requests a tool modification or tool move, the new supplier must follow KUO’s Supplier Quality PPAP Requirements, as well as the KUO Change Management Process described in this manual, and the new supplier will be responsible for any cost not approved by KUO facility via a Tooling Contract.

• Parts produced with tooling that have inserts subject to a high rate of wear (e.g., aluminum die castings) that will not provide the program volume will require a request to KUO facility by the parts supplier for funds to replace the inserts. Any such request(s) are subject to advance review by KUO Facility Cost Engineering activity.

• Where a parts supplier designs, develops or manufactures production tooling or prototype tooling in house, and the engineering center/tool room is budgeted as a separate profit center, a reasonable profit margin on the cost design, development, and manufacture of the tools will be allowed. All overhead costs and profit associated with the design and manufacture of special tooling should be included in fully accounted tooling labor rates. When a separate profit center is declared, the supplier is subject to a verification audit which may include a review of such things as organization charts and factory layouts (in-house tool operation); ledger and actual money transfers between units; and any documentation demonstrating that any in-house tool costs are accounted for separately and not absorbed as overhead and SG & A. In addition, KUO facility will review the composition of the labor and material rates and exclude any “double recoupment” of these costs.

• **Examples of tooling related expenses that are not acceptable are employee travel expenses, layouts, sampling cost (PPAP, tooling/process run-offs), general staff resources, etc.**

• KUO does not permit parts supplier to make a profit on production or prototype tooling designed and manufactured by a tool supplier. Additionally, incremental costs associated with procurement, follow up, etc. are considered to be part of the parts supplier’s overhead costs and likewise recovered in the burden portion of the production piece price.

• Funding for prototype special tooling, which will not be used to produce production parts, will be provided through the Engineering budget. Pull-ahead production tooling used for prototype, which will be used later to produce production parts, will be treated as normal production tooling and be funded using a production Tooling Contract.

• KUO claims ownership of all tooling designs and tooling. Any vendor claims of proprietary tooling, or tooling design, shall be deemed intellectual and physical property of the vendor, and therefore NOT reimbursable by the KUO Facility Purchase Order. Any vendor claimed proprietary tooling or design included in the KUO Facility Purchase Order may be removed at any step of the review of audit process. KUO facility shall have access to all special tooling and designs at their request.

• Final interpretation of these guidelines is the responsibility of the KUO Purchasing & Development Team – Vendor Tool Group. These Guidelines are not subject to vendor interpretation. Any questions of intent and purpose are to be discussed with the tooling group before issuance of the Tooling Purchase Order to the Vendor.
3.17.2 Tooling Cost and Audit Guidelines

Purchase Contract Term

Special Term – Tooling

Buyer shall reimburse Seller the lesser of (i) the amount specified in this contract, or (ii) Seller’s actual costs for purchased materials and services (including purchased tooling or portions thereof), plus Seller’s actual direct costs for labor and overhead typically associated with tool construction. Seller shall establish a reasonable accounting system that readily enables the identification of Seller’s costs. Buyer or its agents shall have the right to audit and examine all books, records, facilities, work, material, inventories and other items relating to any claim of Seller for tooling.

KUO’s obligation is to reimburse the approved tooling incurred up to the amount authorized by the Tooling Contract. KUO Facility does not reimburse suppliers for tooling costs in excess of the amount authorized or for tooling that was not specified (and authorized) by the Tooling Contract. If the actual cost incurred is less than the Tooling Contract amount, the supplier is expected to notify the buyer so that the Tooling Contract can be adjusted to actual cost(s). The supplier is responsible for monitoring the content of all subcontracted tooling such as outsourced components, to ensure conformity to KUO requirements.

3.17.3 Tooling Cost Documentation

An accounting system, in accordance with generally accepted accounting practices, must be maintained by the supplier to segregate, accumulate, and document expenditures for KUO-owned tooling. The supplier’s accounting system must ensure that all eligible costs are documented adequately and include the following:

3.17.3.1 Material

Material requisitions that indicate quantities used and unit cost by Tooling Contract must be prepared made available. Material will be reimbursed normally at actual costs based on invoices. Material costs should be reduced for any such costs recovered from tooling authorized for disposal or for material used for prototype parts (that was purchased under a separate tooling contract).

3.17.3.2 Labor Rates and Hours

The toolmaker will complete the KUO Production Tooling Cost Breakdown for Tools, Assembly Fixtures & Gages. The labor rate quoted on the RFQ shall include all overhead costs and profit associated with the design and manufacture of special tooling shall be included in the Tooling Cost Breakdown Worksheet. The Labor rate will be reviewed by the Tool Analysis group for reasonableness before the issuance of the Tooling Contract.
3.17.3.3 Subcontracted Work

All work subcontracted to tooling sub-suppliers must be supported by at least a tooling contract, invoice, and proof of payment (including a waiver of claim or lien from the sub-supplier).

If tooling is obtained through or by a supplier-owned subsidiary or affiliate (50%+ supplier ownership), those costs will be regarded as “in-house” costs and subject to verification.

3.17.3.4 Supplier Billings

The supplier’s invoice for tooling costs incurred should reflect the Tooling Contract amount, or the actual costs incurred, whichever is less. At no time should the supplier’s invoice exceed the amount of the Tooling Contract. If a discrepancy exists with your tooling contract amount, consult your Buyer prior to invoicing.

3.17.4 KUO Tooling Audits

All tooling contracts are subject to audit. In the event KUO audits the supplier’s tooling cost, it will be necessary to make available supporting documents. This documentation will be required to verify the actual and reasonable costs associated with the Tooling Contract(s) and amendments selected for audit.

3.17.4.1 Administrative Issues

Tooling purchased by KUO is the property of KUO or their involved customers under KUO notifications and held by suppliers on a bailment basis pursuant to KUO’s terms and conditions of purchase.

Purchasing maintains a system for proper control and disposal of purchased tooling. In order to minimize KUO’s costs and to ensure continuous availability of parts to our customers, Service Parts Purchasing activities must be consulted before scrapping or reworking production tooling to a new design level.

A supplier is not permitted to use existing tooling for the manufacture of parts for other customers without the prior written approval of a Production Purchasing Director and equivalent level Purchasing Manager at the appropriate Service Parts Purchasing activity (if applicable). A tooling usage agreement must be obtained to authorize such use.
### 3.17.5 Tooling Payment Responsibility Matrix

The following tooling payment responsibility matrix is not considered all-inclusive, but rather is provided by KUO to assist suppliers in determining the acceptability or unacceptability of Special Tooling versus Capital Machinery & Equipment/investment of Facility Cost. This matrix will be reviewed from time to time. In any event, specific questions should be directed to KUO Purchasing & Supplier Development with Global Cost Engineering – Vendor Tool Group. A supplier may choose to include components and/or processes listed are not acceptable in the following matrix in their tools. However, KUO will not reimburse the supplier for these items.

<table>
<thead>
<tr>
<th>Miscellaneous Items, General Associated Costs</th>
<th>Tooling and Related Cost Items Responsibility</th>
<th>KUO Cost Decision Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Carrying Cost</td>
<td>X</td>
<td>For: Only when assessed and not recoverable on special tools</td>
</tr>
<tr>
<td>Launch Cost</td>
<td>X</td>
<td>Against: Fitting production tooling to manufacturing equipment</td>
</tr>
<tr>
<td>Taxes</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Installation Cost, Set up Cost, And Adaptation, Costs of Tooling</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Capital Items**

<table>
<thead>
<tr>
<th>Standard Machine – Machine which can shape of form material by means of cutting, pressure Impact or Electrical Techniques (EDM, CNC)</th>
<th>X</th>
<th>Tooling can be replaced to process other components and also considered a standard tool.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Purpose machine – a unique or special machine for the production of a part over the project life. Totally dedicated to the production of a part o components (CMM)</td>
<td>X</td>
<td>Machine and equipment 100% supplier responsibility</td>
</tr>
<tr>
<td>Assembly Machine – Powered process for putting together a set of mating components to make a semi or finished product</td>
<td>X</td>
<td>Does not change the shape of any individual part</td>
</tr>
</tbody>
</table>

**Dies**

<table>
<thead>
<tr>
<th>Air Cylinders, Gas, and Nitrogen Pads</th>
<th>X</th>
<th>Only when Integral Part of Die</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automation – In most cases NOT acceptable</td>
<td>X</td>
<td>Only when Integral Part of Die. Allowed details are only those required to maintain part orientation, alignment, or position during the process</td>
</tr>
<tr>
<td>Binder Development</td>
<td>X</td>
<td>Required for unique KUO</td>
</tr>
<tr>
<td>Blanking Dies/Trim Dies -</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Blanking Dies/trim Dies</td>
<td>X</td>
<td>Metal turning units, standard racks, and standard trim dies to blank trapezoid or rectangular blanks</td>
</tr>
<tr>
<td>------------------------</td>
<td>---</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Bolster Plates</td>
<td>X</td>
<td>Including upper and lower plates for transfer dies</td>
</tr>
<tr>
<td>Design Directly Related to Dies and Details</td>
<td>X</td>
<td>These costs include CAD/CAM, that is engineering directly for the stamping dies and can include simulation (only relating to special tooling only) layout, binder development, and updating drawing information with changes</td>
</tr>
<tr>
<td>Die Models</td>
<td>X</td>
<td>Die Models are acceptable when: No CAD data is available and model would be the “Master”. A KUO engineering request with prior approval from finance is charged to the engineering budget, not special tools program budget (including sight models). Models must be updated with “CR” changes</td>
</tr>
<tr>
<td>Die Risers</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dies</td>
<td>X</td>
<td>Coining; Cold Forming; Compacting (for powdered metal parts before sintering); Extrusion; Forging; Progressive; Sizing (for powdered metal parts before sintering); Stamping; Straightening; Transfer &amp; Warm forming</td>
</tr>
<tr>
<td>Extrusion Dies</td>
<td>X</td>
<td>When used for semi-finished parts</td>
</tr>
<tr>
<td>Maintenance</td>
<td>X</td>
<td>All maintenance costs including post repair tryout, spare parts, second dies set, etc.</td>
</tr>
<tr>
<td>Pierce/Stud Insertion Heads</td>
<td>X</td>
<td>Only when integral in die. Feed units for all are NOT allowed</td>
</tr>
<tr>
<td>Roll Forming</td>
<td>X</td>
<td>Only form details ( anvils) which contact the material to form shape (including details for pre &amp; post operations, only details that are created unique to the form)</td>
</tr>
<tr>
<td>Transport Rails</td>
<td>X</td>
<td>Standard (Non integral)</td>
</tr>
<tr>
<td>Transport Rails</td>
<td>X</td>
<td>Integral in Progressive Die</td>
</tr>
<tr>
<td>Transport Rails</td>
<td>X</td>
<td>Located fingers/details</td>
</tr>
<tr>
<td>Transport Racks</td>
<td>X</td>
<td>Standard idle stations, in process racks, shipping racks</td>
</tr>
</tbody>
</table>

**Welding and Assembly Fixtures**

It is highly recommended that the design and build of weld and assembly tooling utilize standard components. These components can include standard bases with uniform mounting hole patterns and standard size riser details such as North American Mechanical Standard (NAMS) used in North America. When utilized these items are considered to be supplier owned tooling and Not included as special tooling.

<p>| Automated, “Turn Key” Welding and Assembly Equipment | X | Pedestal Welders and Press Welders |
| “C” Frames | X | Unless Integral Part of Fixture |
| Hydraulic and Pneumatic Items | X | Machine Feeds, safety items, and guarding (other than tooling base) |
| Machine Bases | X | Only Specific Locators |
| Projection Weld Fixtures | X | Would only be allowed in Geo – Fixture |
| Hard Automation (weld gun mounted on fixture) is not recommended | X | General Equipment |
| Motors | X | Only when unique and required for KUO part |
| Ergonomic Handling Devices | X | Weld timers, transformers and cables |
| Locating Fixtures | X | |
| Weld Spot Models | X | |
| Capital Welding Equipment | X | |</p>
<table>
<thead>
<tr>
<th>Category</th>
<th>X</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weld Guns (All)</td>
<td></td>
<td>Includes weld guns, stud guns, templates, handling devices, etc.</td>
</tr>
<tr>
<td>Operator Equipment</td>
<td></td>
<td>Includes Geometric Fixtures, respot locating fixtures, and other dimensional</td>
</tr>
<tr>
<td>Welding &amp; Assembly Fixtures</td>
<td></td>
<td>holding fixtures.</td>
</tr>
<tr>
<td>Tables, Frames, and other Capital Equipment</td>
<td></td>
<td>Only part support (nest) designed for single part</td>
</tr>
<tr>
<td>Casters/Wheels</td>
<td>X</td>
<td>Only specific locating fixture including details to hold gap constant for</td>
</tr>
<tr>
<td>Table lift and turn tables</td>
<td>X</td>
<td>welding.</td>
</tr>
<tr>
<td>Laser Process</td>
<td>X</td>
<td>Includes installation, safety equipment, exhaust equipment, etc.</td>
</tr>
<tr>
<td>Laser Fixture</td>
<td>X</td>
<td>Only integral pipe and wire to fixture itself. Pipe and wiring to fixture not</td>
</tr>
<tr>
<td>Laser Cells</td>
<td>X</td>
<td>allowed.</td>
</tr>
<tr>
<td>Lighting and Ventilation</td>
<td>X</td>
<td>Included in Prototype Part Cost</td>
</tr>
<tr>
<td>Light Curtains and other Safety Equipment</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Fixture Pipe and Wiring</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Transfer Nest</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Prototype Parts For Tooling Aids (Only used to make production tools)</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Molds & Patterns**

<table>
<thead>
<tr>
<th>Category</th>
<th>X</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designs Directly Related to Molds and Patterns</td>
<td>X</td>
<td>Unique for manufacturing KUO part</td>
</tr>
<tr>
<td>Development Plasters</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Molds for Rubber, Plastics, Foam, Nonferrous and Ferrous Metals</td>
<td>X</td>
<td>Unique for tool KUO Part</td>
</tr>
<tr>
<td>Water Jet Nests</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Patterns - Casting</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Foam</td>
<td>X</td>
<td>Models, Patterns, ILD Blocks, Templates</td>
</tr>
<tr>
<td>Gas Counter Pressure / Vacuum Systems (Intellimold, etc.)</td>
<td>X</td>
<td>KUO will reimburse cost of conventional clamp plate only</td>
</tr>
<tr>
<td>Quick Change Mold Plates</td>
<td>X</td>
<td>Unless integral to mold block or rails</td>
</tr>
<tr>
<td>Water Manifolds</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Quick Change Connectors – (Staubli type,</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>etc.</td>
<td>X</td>
<td>Requires buy-off from KUO buyer – SDE team and KUO Cost Engineer (Piece price related)</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>---</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Cavitation beyond minimum required for production volumes</td>
<td>X</td>
<td>Capital Equipment</td>
</tr>
<tr>
<td>Hot Runner Controllers/Manifold Controllers and Connectors</td>
<td>X</td>
<td>Capital Equipment</td>
</tr>
<tr>
<td>Pneumatic/ Hydraulic Controllers and Connectors</td>
<td>X</td>
<td>Only allowed when critical parts are involved.</td>
</tr>
<tr>
<td>Molds Flow Analysis</td>
<td>X</td>
<td>Capital Equipment</td>
</tr>
<tr>
<td>Robots / Automated Pickers</td>
<td>X</td>
<td>Grippers, Fingers</td>
</tr>
<tr>
<td>End of Arm Tooling</td>
<td>X</td>
<td>Only allowed when critical parts are involved.</td>
</tr>
<tr>
<td>Inserts Holder Blocks</td>
<td>X</td>
<td>Capital Equipment</td>
</tr>
<tr>
<td>Eye Bolts (Standard for Swivel)</td>
<td>X</td>
<td>Nests only</td>
</tr>
<tr>
<td>Gas Assist Controllers &amp; Connectors (Gain, Epcos, etc. Though Nozzle or pin)</td>
<td>X</td>
<td>Capital Equipment</td>
</tr>
<tr>
<td>De-gating or Routing Fixtures</td>
<td>X</td>
<td>Nests only</td>
</tr>
<tr>
<td>Clip and Fasteners Fixtures</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Cooling Racks</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Spare Parts</td>
<td>X</td>
<td>The supplier is responsible for maintenance / replacement</td>
</tr>
<tr>
<td>Part Layout / Dimensional Studies</td>
<td>X</td>
<td>These are PPAP costs and therefore KUO will not reimburse these expenses as special tooling. It is part of piece price</td>
</tr>
<tr>
<td>Core Boxes</td>
<td>X</td>
<td>Necessary to production tool</td>
</tr>
<tr>
<td>Die replacement (casting)</td>
<td>X</td>
<td>Unique tool for KUO part cavity portion only</td>
</tr>
<tr>
<td>Mandrils or Mandrels – unique hoses</td>
<td>X</td>
<td>Unique tool for KUO part</td>
</tr>
<tr>
<td>Molds – Die Cast, Permanent, Low Pressure, Gravity.</td>
<td>X</td>
<td>Unique tool for KUO part</td>
</tr>
<tr>
<td>Die Cast Dies – Nonferrous</td>
<td>X</td>
<td>Unique tool for KUO part</td>
</tr>
<tr>
<td>Trim Dies</td>
<td>X</td>
<td>Unique tool for KUO part</td>
</tr>
<tr>
<td>Trim Fixtures</td>
<td>X</td>
<td>Unique tool for KUO part</td>
</tr>
<tr>
<td>Set-up and Adaption Costs</td>
<td>X</td>
<td>Only when moving a tool to new supplier and under decision of KUO</td>
</tr>
</tbody>
</table>

**Tube and bar Benders**
<table>
<thead>
<tr>
<th></th>
<th>Design</th>
<th>Air &amp; Hydraulic Cylinders</th>
<th>Arbors, Mandrels, Slides</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hardware</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruments (standard commercially available)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computers (including monitor, keyboard, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabinets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Hydraulic, air, Control, &amp; Electrical Lines (should be designed with quick connectors)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surge Tanks (Tanks should be outside of frame and designed with quick disconnects)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solenoid (Tanks should be designed with disconnect, not hardwired)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note: All disconnects should be located to a common header block for each system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Software</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating System</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application Software</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety Related Equipment (e.g. shielding, fencing, guards, light curtains)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Although this topic is specifically titled for Tube Benders these rules will generally apply to all specialty designed tooling that contains both the elements of special tooling and supplier owned equipment (AKA Capital Equipment).

Excluded facility engineering design due to integration of benders into specific line operations at a supplier location.

Only when they are part an integral part of the bending operation.

Special part holding and bending.
<table>
<thead>
<tr>
<th>Casting</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Design directly related to the actual tool (i.e. detailed drawings of tool steels, plan of die, section views, etc..)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Development Patterns</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Cavitation beyond minimum required for production volumes</td>
<td>X</td>
<td>Requires buy-off from KUO buyer – SDE team and KUO Cost Engineer (Piece price related)</td>
</tr>
<tr>
<td>Spare Cavities / Inserts</td>
<td>X</td>
<td>Already included in piece price</td>
</tr>
<tr>
<td>Internal Engineering Changes</td>
<td>X</td>
<td>Supplier is responsible unless driven by KUO “CR” and must be documented</td>
</tr>
<tr>
<td>Engineering Related Costs</td>
<td>X</td>
<td>Not acceptable already included in burden and piece price</td>
</tr>
<tr>
<td>Gas Counter Pressure / Vacuum Systems</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Quick Change Mold Plates</td>
<td>X</td>
<td>KUO will reimburse cost of conventional clamp plate</td>
</tr>
<tr>
<td>Quick Change Connectors – (Staubli type, etc.)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Manifold Controllers and Connectors</td>
<td>X</td>
<td>Capital Equipment</td>
</tr>
<tr>
<td>Pneumatic / Hydraulic Controllers and Connectors</td>
<td>X</td>
<td>Capital Equipment</td>
</tr>
<tr>
<td>Robots / Pickers / Manipulators</td>
<td>X</td>
<td>Capital Equipment</td>
</tr>
<tr>
<td>End of Arm Tooling</td>
<td>X</td>
<td>Grippers &amp; Fingers only</td>
</tr>
<tr>
<td>Process Tooling</td>
<td>X</td>
<td>Nests and part touching details – must be unique</td>
</tr>
<tr>
<td>Eye Bolts (Standard of Swivel)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Gas Assist Controllers and Connectors</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>De-gating or Routing fixtures</td>
<td>X</td>
<td>Nests only</td>
</tr>
<tr>
<td>Leak Test Tooling</td>
<td>X</td>
<td>Nests and Calibration Master</td>
</tr>
<tr>
<td>Inspection Fixtures / Test Fixtures</td>
<td>X</td>
<td>Only when specified by KUO requirements – Not in-process</td>
</tr>
<tr>
<td>Final Inspection Gages</td>
<td>X</td>
<td>When inspection gage is a purchased electric device; only the nest and any part specific probes will be accepted</td>
</tr>
<tr>
<td>Spare parts</td>
<td>X</td>
<td>The supplier is responsible for maintenance / replacement</td>
</tr>
<tr>
<td>Part Layout / Dimensional Studies</td>
<td>X</td>
<td>These are PPAP costs and therefore</td>
</tr>
</tbody>
</table>

Cavitation beyond minimum required for production volumes:**

- **Gas Counter Pressure / Vacuum Systems**
- **Quick Change Mold Plates**
- **Quick Change Connectors**
- **Manifold Controllers and Connectors**
- **Pneumatic / Hydraulic Controllers and Connectors**
- **Robots / Pickers / Manipulators**
- **End of Arm Tooling**
- **Process Tooling**
- **Eye Bolts (Standard of Swivel)**
- **Gas Assist Controllers and Connectors**
- **De-gating or Routing fixtures**
- **Leak Test Tooling**
- **Inspection Fixtures / Test Fixtures**
- **Final Inspection Gages**
- **Spare parts**
- **Part Layout / Dimensional Studies**

- **Already included in these are PPAP costs and therefore:**
  - **Development Patterns**
  - **Internal Engineering Changes**
  - **Engineering Related Costs**
  - **Gas Counter Pressure / Vacuum Systems**
  - **Quick Change Mold Plates**
  - **Quick Change Connectors**
  - **Manifold Controllers and Connectors**
  - **Pneumatic / Hydraulic Controllers and Connectors**
  - **Robots / Pickers / Manipulators**
  - **End of Arm Tooling**
  - **Process Tooling**
  - **Eye Bolts (Standard of Swivel)**
  - **Gas Assist Controllers and Connectors**
  - **De-gating or Routing fixtures**
  - **Leak Test Tooling**
  - **Inspection Fixtures / Test Fixtures**
  - **Final Inspection Gages**
  - **Spare parts**
  - **Part Layout / Dimensional Studies**
<table>
<thead>
<tr>
<th>Continuous Cavity Replacement Funds (CCR Tooling Guidelines For Die Cast Tools)</th>
<th></th>
<th>KUO will not reimburse these expenses as special tooling. It is part of piece price</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CCR tooling funds accumulated in the piece price are to be used to purchase replacement tooling for Tooling that has been paid for by KUO through an original Tool Purchase Order; or for tooling moved by KUO to the new supplier</strong></td>
<td></td>
<td>That replace existing tooling purchased through a KUO Tool Purchase Order</td>
</tr>
</tbody>
</table>

| Replacement Cavities, Inserts, Cores, and related Tooling | X |  |
| Replacement Retainer(s) | X |  |
| Ejector Pins | X | Only when replacing cavity/core |
| Maintenance of the Die Cast Machine; Trim Press | X |  |
| Trim Die, Blades, etc. | X |  |
| Robots | X |  |
| Clean and Lube Fixtures, Auto Sprayers, auto lube, etc. | X |  |
| Casting Machine Components – Replacement | X |  |
| Spray Manifolds - Replacement | X |  |

**Engineering Design Changes – “CR’s”**

"Generally CR’s are covered by a separate Tool Purchase Order and not from the CCR fund. However, in the event an insert would be obsolete due to an engineering change, the CCR funds accumulated at that point from normal cavity replacement must be used to offset the total cost of the “CR” and documented in the KUO Purchase Order. When the supplier is asking for the engineering change, then it will be the responsible to cover the total cost involved in the
<table>
<thead>
<tr>
<th><strong>Machining</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specific machining tooling are acceptable only when special and unique to a specific part, model, or product and are not acceptable when a standard shelf type item. Must not include computer terminals, keyboards, printers, “smart” columns, or electronic readouts.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Air Cylinders</strong></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Arbors</strong></td>
<td>X</td>
<td>Special Part Holding</td>
</tr>
<tr>
<td><strong>Broach Cutters</strong></td>
<td>X</td>
<td>Only first complement</td>
</tr>
<tr>
<td><strong>Broach Holders</strong></td>
<td>X</td>
<td>Only first complement</td>
</tr>
<tr>
<td><strong>Duplicating Aids</strong></td>
<td>X</td>
<td>Only for special designs KUO can change that decision</td>
</tr>
<tr>
<td><strong>Drill Plates</strong></td>
<td>X</td>
<td>Only unique</td>
</tr>
<tr>
<td><strong>Cams</strong></td>
<td>X</td>
<td>Special clamping portion only (jaws, collets, etc.) and only the first complement. <strong>Chucks are not acceptable</strong></td>
</tr>
<tr>
<td><strong>Jaws</strong></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Cutter Bodies</strong></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Design</strong></td>
<td>X</td>
<td>Fixture design only. Excludes facility engineering design due to integration of fixtures into specific line operations at supplier location</td>
</tr>
<tr>
<td><strong>Part Holding Fixtures</strong></td>
<td>X</td>
<td>All special types</td>
</tr>
<tr>
<td><strong>Forming Tools</strong></td>
<td>X</td>
<td>Only first complement</td>
</tr>
<tr>
<td><strong>Gangmasters</strong></td>
<td>X</td>
<td>Camshaft Contour</td>
</tr>
<tr>
<td><strong>Grinding Wheel</strong></td>
<td>X</td>
<td>Perishable tooling</td>
</tr>
<tr>
<td><strong>Grinding Wheel Tooling</strong></td>
<td>X</td>
<td>Cam follower is acceptable when a specific/unique form configuration is required and only the first complement of wheel</td>
</tr>
<tr>
<td><strong>Heat Treatment Racks</strong></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Hydraulic &amp; Pneumatic Items</strong></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Jigs</td>
<td>X</td>
<td>Only when specific to a KUO Part Number</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>---</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Motors</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Spindle Heads</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Machine Detail</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Multiple Sets of Tools</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>CNC Programming</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Master Gears – Checking, Lapping &amp; Reference</td>
<td>X</td>
<td>Only first tool</td>
</tr>
</tbody>
</table>

| Perishable Tools & Hand Tools             | X | Covered by piece price                          |
| Single, and Multiple Adjustable Spindle Units | X |                                               |
| Temporary Tooling – When required due to timing resulting from late engineering changes or crash programs | X | If directed by KUO, on limited basis and dependent on type of tool |
| Tool Holders                             | X | Capital Equipment                               |
| CNC Cutter Paths (For manufacturing part) | X | Included in supplier overhead                   |

**Electric & Electronic**

**Components, Assembly, and Testing**

| Dies and Details                        | X | Required for components unique to KUO part |
| Grease Application Equipment            | X |                                               |
| Injection Molds                         | X | Required for components unique to KUO part |
| “Nesting” Fixtures – that hold components during (Automated/Manual assembly) | X | That hold components during (Automated/Manual assembly operations and material handling tooling unique to KUO part |
| Test Equipment                          | X |                                               |

**Hardware –**

- Instruments (Shelf bought)              | X |                                               |
- Computers (inc. Monitor & Keyboard)     | X |                                               |
- Cabinets                                | X |                                               |
- Cables                                  | X |                                               |
- Automatic Stampers                      | X |                                               |
### Software –

<table>
<thead>
<tr>
<th>Software</th>
<th>X</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Application Software</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Test Code (specific to module under test)</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

### Test Chambers –

<table>
<thead>
<tr>
<th>Test Chambers</th>
<th>X</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burn-In</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Refrigeration</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Additional Requirements</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>- Racks</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>- Rack Fixtures</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>- Test Fixtures</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Wire Harness Assembly Boards / Checker Test Boards

<table>
<thead>
<tr>
<th>Wire Harness Assembly Boards / Checker Test Boards</th>
<th>X</th>
</tr>
</thead>
</table>

### Wire Twist Units – Mastic Pad units, Shrink Tubing units, conveyors, ovens, etc.

<table>
<thead>
<tr>
<th>Wire Twist Units – Mastic Pad units, Shrink Tubing units, conveyors, ovens, etc.</th>
<th>X</th>
</tr>
</thead>
</table>

### Other

<table>
<thead>
<tr>
<th>Other</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Tools (single nutrunners, drills, etc…)</td>
<td>X</td>
</tr>
<tr>
<td>Multiple Spindle Air Tools (used for simultaneous fastening of a bolt pattern)</td>
<td></td>
</tr>
<tr>
<td>Balconies – Control Panels, Railings, Stairways, Surge Tanks, and Overhead Lifts.</td>
<td></td>
</tr>
<tr>
<td>Compression Costs – Incremental premium direct labor charges are acceptable only when it is necessary to improve tool timing. These charges must be approved by the KUO buyer and identified separately as a line entry on the Tooling Contract. Fully loaded labor will not be acceptable for premium compressions timing charges</td>
<td>X</td>
</tr>
<tr>
<td>Computer Equipment – (Hardware/general software)</td>
<td></td>
</tr>
<tr>
<td>Control Devices &amp; Error Proofing</td>
<td>X</td>
</tr>
<tr>
<td>- That regulate machine functions, line functions, and /or automated handling mechanism functions</td>
<td></td>
</tr>
<tr>
<td>- That regulates fixture only functions and must be integral</td>
<td>X</td>
</tr>
<tr>
<td>Description</td>
<td>X</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>Embossing Rolls – (unique patterns/masks including unique engraving)</td>
<td>X</td>
</tr>
<tr>
<td>General and Special Purpose Automation Equipment</td>
<td>X</td>
</tr>
<tr>
<td>Load and Unload Fixtures, Transfer Fixtures, or Turnover Fixtures -</td>
<td>X</td>
</tr>
<tr>
<td>Masks (painting or tin plating) for Custom Integrated Circuits – (IC’s)</td>
<td>X</td>
</tr>
<tr>
<td>Material Handling Equipment – Conveyors, hi-lows, Automated Guided Vehicles, etc.)</td>
<td>X</td>
</tr>
<tr>
<td>Microprocessors – Integrated circuits, chips, modules, etc.</td>
<td>X</td>
</tr>
<tr>
<td>Microprocessor Controls – Commercially available programmable devices (e.g., PLC’s, weld controllers, etc.)</td>
<td>X</td>
</tr>
<tr>
<td>Microprocessor – Costs related to production of:</td>
<td></td>
</tr>
<tr>
<td>- Computer Equipment</td>
<td>X</td>
</tr>
<tr>
<td>- Printer</td>
<td>X</td>
</tr>
<tr>
<td>- Recording Devices (Audio and/or Video)</td>
<td>X</td>
</tr>
<tr>
<td>- Vision and Laser Equipment</td>
<td>X</td>
</tr>
<tr>
<td>Tooling Changes -</td>
<td>X</td>
</tr>
<tr>
<td>Quality / PPAP Costs</td>
<td>X</td>
</tr>
<tr>
<td>Rearrangement – Supplier-Owned Machinery and Equipment</td>
<td>X</td>
</tr>
<tr>
<td>Robots</td>
<td>X</td>
</tr>
<tr>
<td>Transport / Racks</td>
<td>X</td>
</tr>
<tr>
<td>Try Out</td>
<td>X</td>
</tr>
<tr>
<td>---------</td>
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</tr>
<tr>
<td>Tryout Material</td>
<td>X</td>
</tr>
<tr>
<td>Poke –Yoke Equipment (Error Proofing)</td>
<td>X</td>
</tr>
<tr>
<td>Safety Related Equipment (e.g. shielding, fencing, guards, light screens, safety mats, etc..)</td>
<td>X</td>
</tr>
<tr>
<td>Software Development</td>
<td>X</td>
</tr>
<tr>
<td>Temporary Tooling</td>
<td>X</td>
</tr>
<tr>
<td>Test Equipment – (for “Test Fixtures” – refer to “Gages” Section):</td>
<td></td>
</tr>
<tr>
<td>- Computer Test Equipment</td>
<td>X</td>
</tr>
<tr>
<td>- Environmental Chambers</td>
<td>X</td>
</tr>
<tr>
<td>- Printer (including barcode label prints)</td>
<td>X</td>
</tr>
<tr>
<td>- Recording Devices (Audio and/or Video)</td>
<td>X</td>
</tr>
<tr>
<td>- Vision and Laser and X-Ray Equipment</td>
<td>X</td>
</tr>
<tr>
<td>- Sequencing related equipment</td>
<td>X</td>
</tr>
<tr>
<td>Vision Systems (camera, arms)</td>
<td></td>
</tr>
<tr>
<td>Benders (Tube and Rod) (tooling details only when designed as a dedicated</td>
<td>X</td>
</tr>
<tr>
<td>Machine Component</td>
<td>X</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>Cut off Tools</td>
<td>X</td>
</tr>
<tr>
<td>Heat Staking Fixture (nests and horns)</td>
<td>X</td>
</tr>
<tr>
<td>Vibration Welding Fixture (nests and horns)</td>
<td>X</td>
</tr>
<tr>
<td>Sonic Welding Fixture (nests and horns)</td>
<td>X</td>
</tr>
<tr>
<td>Work In Process Containers</td>
<td>X</td>
</tr>
<tr>
<td>Simulation (general simulation such as robot, cycle time, line simulations, not specifically special tooling related)</td>
<td>X</td>
</tr>
<tr>
<td>Integration Costs</td>
<td>X</td>
</tr>
<tr>
<td>Dunnage or Packaging</td>
<td>X</td>
</tr>
<tr>
<td>Leak Tester – Frames, electronics, lighting, safety equipment, pneumatic/hydraulic equipment, casters, table lifts, etc. KUO only reimburse as special tooling the costs for nests or part holding fixtures</td>
<td>X</td>
</tr>
<tr>
<td>Special Racks, Hooks.</td>
<td>X</td>
</tr>
<tr>
<td>Masking devices</td>
<td>X</td>
</tr>
<tr>
<td>Statistical Process Control (SPC) Equipment</td>
<td>X</td>
</tr>
<tr>
<td>Gages – Gage tooling used on KUO Final Assembly End Items Only is acceptable. (Any gages for components of sourced assemblies are considered in process gages and are the responsibility of the supplier).</td>
<td></td>
</tr>
<tr>
<td>Holding Tables / Carts</td>
<td>X</td>
</tr>
<tr>
<td>Certification (If required by KUO)</td>
<td>X</td>
</tr>
<tr>
<td>In-Lines gages</td>
<td>X</td>
</tr>
<tr>
<td>Final Inspection Gages Only (Attribute, SPC Data Collecting, Templates)</td>
<td>X</td>
</tr>
<tr>
<td>In-Process Gages – Duplicate gaging for validation, and/or gages for components of an assembly, are the responsibility of the supplier</td>
<td>X</td>
</tr>
<tr>
<td>Measurement Equipment Programming</td>
<td>X</td>
</tr>
</tbody>
</table>
### Measurement Program (edits, on-going maintenance, CR changes, development of measurement points, concept development, measurement reports, etc.)

<table>
<thead>
<tr>
<th>Measurement Program</th>
<th>X</th>
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</table>

### Optical Measurement Equipment – (Laser, Stereo optical measurement system)

<table>
<thead>
<tr>
<th>Optical Measurement Equipment</th>
<th>X</th>
</tr>
</thead>
</table>

- Only when designed and built to achieve compliance with KUO Engineering Specification (ES) performance requirements and unique to a specific part, model, or product (Tooling Only). The special tooling is defined as only the holding fixture/nest within the test fixture to nest and/or hold the part. Other peripheral equipment such as panels, tables, PLC’s, printers, electronics, automation, etc. are NOT allowed as special tooling.

### Test Fixtures

<table>
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<tr>
<th>Test Fixtures</th>
<th>X</th>
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</thead>
</table>

### Standard Equipment for Gages

<table>
<thead>
<tr>
<th>Standard Equipment for Gages</th>
<th>X</th>
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</table>

### Automatic Inspection Equipment

<table>
<thead>
<tr>
<th>Automatic Inspection Equipment</th>
<th>X</th>
</tr>
</thead>
</table>

### In Line/ End of Line Gage Equipment

<table>
<thead>
<tr>
<th>In Line/ End of Line Gage Equipment</th>
<th>X</th>
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</thead>
</table>

### Duplicate Final Gages

<table>
<thead>
<tr>
<th>Duplicate Final Gages</th>
<th>X</th>
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</table>

### CMM Fixtures

<table>
<thead>
<tr>
<th>CMM Fixtures</th>
<th>X</th>
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</table>

### CMM Software

<table>
<thead>
<tr>
<th>CMM Software</th>
<th>X</th>
</tr>
</thead>
</table>

### Gage Master

<table>
<thead>
<tr>
<th>Gage Master</th>
<th>X</th>
</tr>
</thead>
</table>

- All Dies, Trim Dies, Cavities & Inserts, Machining Tooling, must have their own unique serial number identifier; so that tooling can be tracked on the KUO Tracking System. PPAP’s shall refer to the “Die” or “Insert’s” serial Number. KUO Purchasing Team will give you the Unique Serial Number Identifier (VTAM #) to identify each Tooling under property by KUO Customers. See the paragraph 3.16 related all instructions to identify, data submission and managing of the Tooling where the KUO Customers are the proprietary.
4. RECORDS

- DMR Defective Material Report
- PPAP Documentation
- KUO Questionnaire for New Suppliers and/or Current Suppliers Updating
- Feasibility Analysis
- Non-Disclosure Agreement
- Controlled Shipments Level I & II
- Tooling Worksheet with pictures

5. DEFINITIONS

**DMR Defective Material Report** - Quality record registered in TS16949 KUO Plant Procedures, used to formally give notice to the suppliers when a non-conformance is found in the parts or products provided to KUO. Where the Reject data, implications of the reject (including monetary), the type of 8D that the supplier has to send and a suggestion from KUO regarding the disposition of the material, depending on the magnitude of the problem, are specified in this item.

**DMR System (Defective Material Report System)** - DMR issuance Management system where the DMR’s issued to the supplier, part number, causes of the reject and quantities rejected, implication regarding costs, etc. are controlled.

**Non-Conformance** - Non compliance with the Quality System, Procedures, Instructions or Specific Process Sheets

**Non-Conformity** - Non compliance with the specific design and/or specification requirements of a product and/or part. Also known as inconsistency.

**Controlled Shipments** - Additional inspection process implemented at the supplier’s plant, or with a third party providing KUO Plant an additional quality assurance of the parts and/or products provided by a supplier who has shown poor quality in his products, within a certain period of time due to his behavior regarding PPM’s and the number of DMR’s issued.

**SQE (Supplier Quality Engineer)** - In charge of giving formal notice to suppliers about quality issues found in KUO plant, and of the tracking of corrective actions via 8D’s process by working together with the Purchase Team and Supplier’s Development.

**SDE (Supplier Development Engineer)** - In charge of the selection and assessment of new suppliers, validation of new products, APQP execution with suppliers and direct involvement to make the manufacturing process and the Supplier’s Quality System more efficient by working together with the Purchase Team and Supplier’s Quality Engineering Department.
Issuing Entity: It refers to functions enabled to issue a Defective Material Report (DMR). This can be carried out by the individual in charge of Receipt Quality Assurance or by The Supplier Quality Engineer (SQE).

DASA: Desc Automotive (Now KUO)
PPAP: Production Parts Approval Process
APQP: Advanced Product Quality Planning
FMEA: Potential Failure Mode and Effects Analysis
QSA: Quality System Assessment
MSA: Measuring System Analysis
SPC: Statistical Process Control
“RAMP UP”: Production Stabilization Process. Time shall depend on project (customer production requirements), capacity growth and the supplier’s process capability.

War- Room: Room intended for the exhibition of performance charts of KUO’s worst suppliers.
8D’s. Report: Report generated to Solve Quality Issues, which is a KUO Mandatory Requirement and which is based on “Ford Motors Co. Global 8D’s” Process.
Poka-Yoke: Error-proofing Device, classified into three types: (I) A defect cannot be produced, (II) The defect is produced but the part cannot be released and (III) the defect is produced, the part can be released but a light or sound alarm goes off.
Core Team: Multi-skilled Team integrated by the supplier to carry out the APQP process planning and development in all its phases.
PP Containment: Pre-production Containment.
Supplier: Organization or individual providing a product
Sub-Supplier: Organization or individual who is a part of the supply chain, and who is actively participating in the raw material supply or in the transformation of the product that is being provided by the supplier.
Customer: Organization or individual receiving a product
## 6. CHANGES

<table>
<thead>
<tr>
<th>Date of Release</th>
<th>Level</th>
<th>Description of Change</th>
<th>Elaborated by</th>
<th>Revised by</th>
<th>Approved by</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2000</td>
<td>1</td>
<td>Issue</td>
<td>R. Luis</td>
<td>R.Luis</td>
<td>J. Herrera</td>
</tr>
<tr>
<td>April 18th, 2005</td>
<td>2</td>
<td>General Revision</td>
<td>Marco A. Gutiérrez</td>
<td>E. Martinez</td>
<td>M. Suro</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C. Simón Méndez</td>
<td></td>
<td></td>
</tr>
<tr>
<td>August 20th, 2012</td>
<td>3</td>
<td>General Revision, Change DASA by KUO, add new 3.8, 3.15, 3.16 and add 3.17</td>
<td>Marco A. Gutiérrez C.</td>
<td>E. Valencia</td>
<td>B. Neal</td>
</tr>
<tr>
<td>February 19th, 2014</td>
<td>4</td>
<td>Change KUO Transmisiones Logo by TREMEC Logo</td>
<td>Marco A. Gutiérrez C.</td>
<td>E. Valencia</td>
<td>B. Neal</td>
</tr>
<tr>
<td>September 19th, 2014</td>
<td>5</td>
<td>Changed number of master samples for annual layouts and Specific Customer Requirements</td>
<td>Marco A. Gutiérrez C.</td>
<td>E. Esparza</td>
<td>B. Neal</td>
</tr>
<tr>
<td>March 02nd, 2015</td>
<td>6</td>
<td>Correction of Revision Level in the bottom of the pages</td>
<td>Marco A. Gutiérrez C.</td>
<td>E. Esparza</td>
<td>A. Herrera</td>
</tr>
</tbody>
</table>
APPENDIX I

Supplier Profile
and
Self-Assessment Forms
SUPPLIER GENERAL PROFILE

<table>
<thead>
<tr>
<th>Name of Supplier</th>
<th>Address</th>
<th>Phone #</th>
<th>Fax #</th>
</tr>
</thead>
<tbody>
<tr>
<td>KUO buyer</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Product</th>
<th>KUO buyer</th>
<th>WEB Page</th>
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<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Main Contact/ Position</th>
<th>Name/Position</th>
<th>e-mail</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Manager</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Quality Manager</td>
<td></td>
<td></td>
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<tr>
<td>Customer Service</td>
<td></td>
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</tr>
<tr>
<td>Sales Manager</td>
<td></td>
<td></td>
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<tr>
<td>Engineering Manager</td>
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</tbody>
</table>

The intent of this questionnaire is to know in a general manner the Organizational Structure and the Main Capabilities and Skills of the Supplier.

Turn in the Questionnaire and the Self-evaluation duly filled out to our Supplier’s Development department. This information will be distributed to the adequate personnel for its evaluation and potential follow up audit in your site when it is applicable.

General Information about the Site:

1.- Main Products and Processes:

________________________________________________________________________

________________________________________________________________________

2.- Main Customers:

________________________________________________________________________

________________________________________________________________________

3.- Main Awards Received:

________________________________________________________________________

4.- Main Material Suppliers:

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<tbody>
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<td>A.</td>
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<tr>
<td>B.</td>
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</tr>
<tr>
<td>C.</td>
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<tr>
<td>D.</td>
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<tr>
<td>E.</td>
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<tr>
<td>F.</td>
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<tr>
<td>G.</td>
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<tr>
<td>H.</td>
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<tr>
<td>I.</td>
<td></td>
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</tbody>
</table>
5.- Total Surface of the Land: ____________ m²
   Total Constructed Surface: ____________ m²

6.- Does your company have an insurance? YES NO
   Insurance Coverage: ________________________
   Insured Amount $ ____________

7.- Used Capacity: ____________ %
   In how many shifts?: ____________

8.- Personnel:
   Total of Employees: ____________
   Total of Employees in Quality: ____________
   Schedule for the Personnel in Quality Function:
   How many shifts of the Personnel in Quality:
   Total of Non-unionized personnel: ____________
   Total of Unionized Personnel: ____________

9.- Union: YES No
   Name: __________________________________
   Contract Expiration Date: ____________

10.- Do you use CAD/CAM? YES NO
    Description of CAD Softwares:
    ____________________________________________
    ____________________________________________
    ____________________________________________
    Description of CAM Softwares:
    ____________________________________________
    ____________________________________________
    ____________________________________________

11.- Do you work or under these kind of techniques and/or methodologies and/or improvement tools:
    Just in Time? YES NO
    6 Sigma? YES NO
    FIFO (First in - First Out)? YES NO
    Lean Manufacturing? YES NO
    G8D’s? YES NO
    5S’s? YES NO
    Zero Defects Quality Control (ZQC)? YES NO
    Total Productive Maintenance (TPM)? YES NO
    Error-Proofing? YES NO
    Overall Equipment Effectiveness (OEE)? YES NO
    KAN BAN YES NO
    KAIZEN YES NO

12.- Do you have ERP (Enterprise Resources Planning)? YES NO
    What Kind of ERP do you have?
    ____________________________________________

13.- What is your policy to control the inventories? (How often and how many times the inventories are rotated?)
    ____________________________________________
14.- List the type of main machinery and quantity:

<table>
<thead>
<tr>
<th>Qty</th>
<th>Description and Type of Machinery</th>
<th>Used Capacity (%)</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

15.- List the main Measuring, Inspection and Test Equipment:

<table>
<thead>
<tr>
<th>Qty</th>
<th>Description and Type of Equipment</th>
<th>Qty</th>
<th>Description and Type of Equipment</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

16.- Compliance of Deliveries to your main Customers: _____ % _____ % _____ %

17.- PPM with your main Customers: _____ _____ _____

18.- Internal PPM (Global): _____

19.- Internal Scrap: _____ %

20.- Overall Equipment Effectiveness (OEE): _____ %

21.- Absenteeism: _____ %
## A. General Systems

<table>
<thead>
<tr>
<th>Score</th>
<th>LEADER OF THE ACTION</th>
<th>CLOSING COMMITMENT DATE</th>
<th>REAL CLOSING DATE</th>
<th>LAST UPDATE</th>
<th>REVISING BACKGROUND</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G/ Y/ R</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

1. **Do you have a Quality Manual?** | R  
2. **Are there documented procedures where the quality function responsibility is defined?** | R  
3. **Does the Quality Department have authority to control nonconforming product?** | R  
4. **Do you have a documented personal training program?** | R  
5. **Do you have a system to manage and control complaints from customers and rejections?** | R  
6. **Is there an ID’s report for every customer complaint?** | R  
7. **Do you apply one or more of the following techniques for the root cause analysis: Cause-Effect Diagram, 5 Why’s, etc.?** | R  
8. **Is the root cause validated using statistic techniques and repeating the failure?** | R  
9. **Is there a documented procedure to implement and manage the learned lessons to similar processes/products?** | R  
10. **Do you have a specific department or people in charge assigned for the APQP of new products?** | R  
11. **Do you have an approval procedure for equipment and/or new and/or refurbished machinery?** | R  
12. **Do you have a system to report “Non Quality Costs” analysis?** | R  
13. **Do you perform internal audits to your quality system on a regular basis in order to assure the compliance with the existing quality procedures?** | R  
14. **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* | R  
   - ISO/TS-16949* | R  
   - ISO-14001* | R  
15. **Does your procedure indicate the communication with your customer when the “certification of the quality system was lost or has expired?”** | R  
16. **Are there “Error Proof” devices in the Workstations?** | R  
17. **Are there documented processes about the implementation, validation and “Error Proof” devices maintenance, and are they clear?** | R  
18. **Do you clearly understand the requirements for Controlled Shipments and Hold in Pre-production?** | R  
19. **Do you use the bar code ID for purchased materials and those materials shipped by your site to the customer?** | R  

---

**COLOR CODE**  
- Green: Task finished on time  
- Yellow: Task may be delayed  
- Red: Task is delayed  
- White: Task rescheduled  
- No follow up  
- Blue: Incorrect Task/Not updated  

---

**SUPPLIER’S SELF-EVALUATION**

**DATE OF OPENING:**  
**DATE OF REVISION:**  
**DATE OF CLOSING:**

Name of the Supplier:  
Location:  
Type of product:  
Commodity:  
Made by:  
SDE/DASA:  
E-MAIL SDE/DASA:  
DASA PLANT:  

---

All printouts of the KUO Suppliers Quality Assurance Manual shall be considered as reference only, since the official information is the one shown on the screen.  
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B. Statistic Process Control

1. Do you have any kind of program to train your personnel in Statistic Process Control (SPC)?

2. Have you documented the strict use of the "Statistic Process Control" for Significant and Critical Characteristics of the Product (SC's, CC's) and process parameters?

3. Is the manufacturing area responsible for the "Statistic Process Control"?

4. Do your procedure require (min) 1.33 Cpk and 1.67 Ppk?

5. Are there process improvement plans documented in case the ability of the process is not reached according to the previous point?

6. Do you use statistical techniques such as Experiment Design, Pareto Analysis, Regression and Correlation Analysis, etc.?

C. Drawings and Specifications

1. Are Quality check drawings and specifications for new products before they are accepted?

2. Are there controls in order to assure that the last level of drawings and specifications are being used in manufacturing and that the quality function personnel is using them in the production areas?

3. Are there data and document control procedures documented?

4. Is there a document on records retention documented? (Life and service of the product + 1 year)

D. Control of Tests and Measurement Equipment

1. Are all of the test and measurement equipment ideally identified?

2. Is there a documented procedure about the control of calibration of the test and measuring equipment?

3. Are the qualification standards in accordance with the National Institute of Standards and Technologies (NIST) or the appropriate International Standard?

4. Are the OSHA studies applied to all kind of measuring devices?

5. Are the studies of the measuring systems in accordance with what is stated in the MSA manual of AIAQ's last revision?

E. Service and Process Material Purchase Control

1. Is there a list of approved suppliers?

2. Are there Quality Audits/Assessments to Suppliers?

3. Is the supplier required to use the Statistic Process Control, and are there records/data available?

4. Do you have the approval for internal and external Thermal Treatment Sources in accordance to the specifications for thermal treatment?

5. Is the sub-supplier required with the material certification and is it frequently verified in your facilities?

6. Is the PPAP process applied to the sub-suppliers?

7. Are the inspected materials in the reception area duly identified and differentiated from all those that are waiting to be inspected?

8. Are there controls to prevent rejected materials to be sent to the warehouses or points of use?

9. Do you track the product from reception to shipment?

10. Are there documented procedures of the Contract Revision?
### F. Nonconforming Material Control

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1</td>
<td>Are there controls in place to prevent nonconforming material movements or suspicious to the normal production flow?</td>
</tr>
<tr>
<td>2</td>
<td>Is the nonconforming product analyzed to find the rejection causes and their effects?</td>
</tr>
<tr>
<td>3</td>
<td>Are corrective actions applied to prevent repetition of non-conformance?</td>
</tr>
<tr>
<td>4</td>
<td>Is there a documented procedure where it is stated the necessary time to dispose from the nonconforming material?</td>
</tr>
<tr>
<td>5</td>
<td>Are there quarantine areas to control the nonconforming material?</td>
</tr>
<tr>
<td>6</td>
<td>Are there rework and selection instructions where the recovered and/or selected material undergoes inspection again?</td>
</tr>
</tbody>
</table>

### G. Process Control

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is the inspection and approval of the first piece required (cast, batch, thermal treatment charge, sample, etc.)?</td>
</tr>
<tr>
<td>2</td>
<td>Do you perform process audits to the product in production?</td>
</tr>
<tr>
<td>3</td>
<td>Is the material identified through the process?</td>
</tr>
<tr>
<td>4</td>
<td>Are the Control Plans, Instruction and Process Sheets available in the work station and are they applied?</td>
</tr>
</tbody>
</table>

### H. Finished Product Verification

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Does finished product undergo a final inspection by the Quality Department?</td>
</tr>
<tr>
<td>2</td>
<td>Are the test/inspection instructions or procedures used?</td>
</tr>
<tr>
<td>3</td>
<td>Do you comply with the PPAP requirements in the 3rd edition of AAG in each presentation with all your customers?</td>
</tr>
<tr>
<td>4</td>
<td>Does the PPAP process include the notification to the customer before shipping the product?</td>
</tr>
<tr>
<td>5</td>
<td>Does the PPAP process include resource assignment for the presentation of annual PPAPs (including sub-components)?</td>
</tr>
</tbody>
</table>

### I. Deviations/Concessions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is there a documented procedure to manage deviations/concessions to the Customer?</td>
</tr>
<tr>
<td>2</td>
<td>Does such procedure include the customer's approval for the deviation/concession?</td>
</tr>
</tbody>
</table>

### J. Production Capacity and Metrics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is there capacity available to support a new business or an increase in the current production volume?</td>
</tr>
<tr>
<td>2</td>
<td>Are “down times” analyzed in production and are there indicators of performance?</td>
</tr>
<tr>
<td>3</td>
<td>Are the deliveries assessed in accordance to the customer's requirements?</td>
</tr>
<tr>
<td>4</td>
<td>Is the customer's opinion posted in the Workstations where the PMs, GMRs, line shutdowns, % of on time deliveries, etc. are shown?</td>
</tr>
</tbody>
</table>
### K. Materials Control

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Are the parts stored and identified and do they have an assigned location?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Is the FPO (First in First Out) system identified and kept?</td>
<td>R</td>
</tr>
<tr>
<td>3</td>
<td>Is the raw material and components inventory kept in accordance with the minimum/maximum quantities level according to the customer's requirements?</td>
<td>R</td>
</tr>
<tr>
<td>4</td>
<td>Are the minimum/maximum quantities deployed in a storage location?</td>
<td>R</td>
</tr>
<tr>
<td>5</td>
<td>Is there a &quot;zero stock&quot; policy in the operations unless the operation is a &quot;Bottle Neck&quot;</td>
<td>R</td>
</tr>
</tbody>
</table>

### L. Workstations Organization (5 S's)

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Are there just the materials, tools and equipment required for the operation in the work station?</td>
<td>R</td>
</tr>
<tr>
<td>2</td>
<td>Are materials, tools and equipment perfectly identified and is the storage location clean and organized?</td>
<td>R</td>
</tr>
<tr>
<td>3</td>
<td>Is organization and cleanliness part of the company? Is it implemented and kept?</td>
<td>R</td>
</tr>
<tr>
<td>4</td>
<td>Are there organization and cleanliness audits for the Workstations and for the whole site?</td>
<td>R</td>
</tr>
</tbody>
</table>

### M. Management

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is there a Continuous Improvement Policy Deployment and is there evidence that it is being applied?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Do plant managers make frequent tours to the Workstations?</td>
<td>R</td>
</tr>
<tr>
<td>3</td>
<td>Are there performance indicators of the production lines checked on a daily basis, where it is check among others: Productivity, OEE, Line shutdowns, etc.?</td>
<td>R</td>
</tr>
</tbody>
</table>

### N. Machinery and Tooling

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Are there maintenance verification lists for machinery and tooling?</td>
<td>R</td>
</tr>
<tr>
<td>2</td>
<td>Are the issues, found during the application of the maintenance verification lists, deployed in the machines and tooling?</td>
<td>R</td>
</tr>
<tr>
<td>3</td>
<td>Is there a documented procedure and records about the control of the wear out of tooling?</td>
<td>R</td>
</tr>
<tr>
<td>4</td>
<td>Are the tooling and machinery control characteristics identified, monitored, measured and controlled for every machine and tooling?</td>
<td>R</td>
</tr>
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</table>
SUPPLIER’S PROFILE AND SELF-EVALUATION

Supplier: 0  Date: 0
Location: 0  SDE/Auditor’s Team: 0

Supplier Review

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<tr>
<th>Category</th>
<th>Potential</th>
<th>Notes</th>
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<tr>
<td>General Systems</td>
<td></td>
<td></td>
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<tr>
<td>Quality Manual</td>
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<td></td>
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<tr>
<td>Documented Responsibility of the Quality Function</td>
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<td></td>
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<tr>
<td>Authority to Control Nonconforming Material</td>
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<tr>
<td>Personal Training</td>
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<td></td>
</tr>
<tr>
<td>Control System for Customer’s Complaints</td>
<td></td>
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<tr>
<td>Root Cause Analysis</td>
<td></td>
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<td>Host Cause Validation</td>
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<td>Learned Lessons Procedure</td>
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<tr>
<td>APQP for New Products</td>
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<td></td>
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<tr>
<td>Total Potential</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Statistic Process Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPC Training</td>
<td></td>
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<tr>
<td>SPC for SCs &amp; CC’s</td>
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<td></td>
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<tr>
<td>SPC’s Responsibility</td>
<td></td>
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<tr>
<td>Total Potential</td>
<td>25%</td>
<td></td>
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<tr>
<td>Control of Tests and Measuring Equipment</td>
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<td></td>
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<tr>
<td>Test and Measuring Equipment Identification</td>
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<tr>
<td>Calibration Standards</td>
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<tr>
<td>Calibration Standards</td>
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<tr>
<td>Total Potential</td>
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<tr>
<td>Service and Process Material Purchase Control</td>
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<tr>
<td>List of Approved Suppliers</td>
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<td>Assessments to Suppliers</td>
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<td>SPC Deployment to Sub-suppliers</td>
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<td>Thermal Treatment Sources Approval</td>
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<tr>
<td>Purchased Material Certification</td>
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<tr>
<td>Deployment of PPAP Process with Sub-suppliers</td>
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<tr>
<td>Purchased Material Inspection</td>
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<td>Total Potential</td>
<td>24%</td>
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<tr>
<td>Non-Materials Control</td>
<td></td>
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<tr>
<td>Prevention of Production Contamination with Nonconforming Material</td>
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<tr>
<td>Analysis of Nonconforming Material</td>
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<td>Corrective Actions for Nonconforming Material</td>
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<td>Disposal Procedure for Nonconforming Material</td>
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<tr>
<td>Total Potential</td>
<td>16%</td>
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<tr>
<td>Process Control</td>
<td></td>
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<tr>
<td>Approval of Initial Sample</td>
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<tr>
<td>Audits to the Process</td>
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<tr>
<td>Total Potential</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Work Stations Organization (5 S’s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unique Material, Tooling and Equipment required for operation</td>
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<td></td>
</tr>
<tr>
<td>Organization of Tooling and Equipment in the Warehouse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Potential</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuous Improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managers’ Visits to Production Areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Potential</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Total Potential</td>
<td>20%</td>
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</table>

% Pts Summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Systems</td>
<td>RED</td>
</tr>
<tr>
<td>Drawings and Specifications Control</td>
<td>RED</td>
</tr>
<tr>
<td>Control of Tests and Measuring Equipment</td>
<td>RED</td>
</tr>
<tr>
<td>Service and Process Material Purchase Control</td>
<td>RED</td>
</tr>
<tr>
<td>Nonconforming Material Control</td>
<td>RED</td>
</tr>
<tr>
<td>Process Control</td>
<td>RED</td>
</tr>
<tr>
<td>Deviations/Concessions</td>
<td>RED</td>
</tr>
<tr>
<td>Production Capacity and Metrics</td>
<td>RED</td>
</tr>
<tr>
<td>Materials Control</td>
<td>RED</td>
</tr>
<tr>
<td>Machinery and Tooling</td>
<td>RED</td>
</tr>
<tr>
<td>TOTAL</td>
<td>RED</td>
</tr>
</tbody>
</table>

Pnts Evaluation Criteria

<table>
<thead>
<tr>
<th>Element</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Element is not in place and there is no evidence of implementation plans</td>
</tr>
<tr>
<td>1</td>
<td>Element is not in place but there is a documented plan for implementation</td>
</tr>
<tr>
<td>2</td>
<td>Element is in place but it is not followed up</td>
</tr>
<tr>
<td>3</td>
<td>Element is in place and it has tracking instability</td>
</tr>
<tr>
<td>4</td>
<td>Element is in place and there is evidence of tracking</td>
</tr>
</tbody>
</table>

FINAL SCORE:

- Green: 80-100%
- Yellow: 60-79%
- Red: <50%

Una empresa kuo

TREMEC 5F/PE

Level: 6 – Issued Date March 02, 2015 – Page 106 of 131

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APPENDIX II

Non-Disclosure Agreement Form
NON-DISCLOSURE AGREEMENT

NON-DISCLOSURE AGREEMENT, MADE BY THE COMPANY NAMED TRANSMISIONES Y EQUIPOS MECANICOS S.A. de C.V. REPRESENTED IN THIS ACT BY ____________________________ IN THE FIGURE OF LEGAL REPRESENTATIVE, WHOM SHALL BE HEREINAFTER CALLED “THE COMPANY” FOR THE PURPOSES OF THIS AGREEMENT, AND THE COMPANY NAMED ______________________ . IN THIS ACT REPRESENTED BY __________________WHO HAS SUFFICIENT AUTHORITY TO ENTER INTO THIS AGREEMENT ON ITS BEHALF, WHICH AUTHORITY HAS NOT BEEN REVOKED, LIMITED OR MODIFIED IN ANY MANNER WHATSOEVER AS OF THE DATE HEREOF AND WHOM SHALL BE HEREINAFTER CALLED “THE RECEIVER”, BOTH “PARTIES” DETERMINE THEY SHALL EXECUTE THE PRESENT AGREEMENT, ACORDING TO THE FOLLOWING STATEMENTS AND CLAUSES:

STATEMENTS:

I. - “The Company” states, through his representative:

1. - To be a Trading Company legally constituted according to the laws of the Mexican Republic, whose main Corporate Objective is to manufacture Transmissions and components which shall be called “the products”, for the effects of the present document.

II.- That for the effects of the present agreement indicates as his Corporate domicile Av. 5 de Febrero Nº 2115 Fracc. Industrial Benito Juárez, Querétaro, Qro. CP 76120, México.

III.- That it is represented by __________________________ in the figure of LEGAL REPRESENTATIVE who has sufficient authority to enter into this Agreement on its behalf, which authority has not been revoked, limited or modified in any manner whatsoever as of the date hereof.

II.- "THE RECEIVER " STATES:

1.- To be the representative in this act of the company ___________________________ that for the best interest of the corporate aims, and of his profession and a better exercise of his activities; requires the information of industrial application, of the methods,
characteristics and production processes of the "products" manufactured by "THE COMPANY".

III.- Both “PARTIES” STATE:

1.- That it is their will to be bound to the present non-disclosure agreement, “THE COMPANY”, providing the pertinent assistance and information to "THE RECEIVER" to study and know the operation of "THE COMPANY", also known as “THE PURPOSE”, keeping the secrecy, discretion and non-disclosure of everything he has seen, listened, read, talked about, investigated in the facilities, with the individuals and documents and electronic means, from and in "THE COMPANY".

2.- That they acknowledge the personality by which they appear, and decide to be bound to the present Agreement, according to the following:

CLAUSES:

FIRST.- "THE COMPANY", allows "THE RECEIVER", to acknowledge and observe in a strict and exclusively confidential manner, the confidential information of his property including, but without limitation, the following items: drawings, pictures, files, specifications, work processes and procedures, of the plant and offices personnel, price information, commercial information, documents, electronic or magnetic means, optical discs, visually or verbally collected data, conversations with the personnel of "THE COMPANY", and in general terms, all the data collected, that could have been observed in the facilities and with the technicians of "THE COMPANY".

SECOND.- Both “PARTIES” accept and are bound to keep in strict secret the information received by "THE RECEIVER" as of the 9th day of the March of 2012 (Effective Date).

THIRD.- "THE RECEIVER" would not be able under any circumstances to grant, or transmit, neither partially nor totally, to any third party, the information neither the knowledge acquired, nor the rights and liabilities, derived from the present agreement, unless there is an express consent in writing granted by "THE COMPANY" for such effect.
Likewise, it shall restrict the access to documentation of any kind containing confidential information to third parties. Additionally, Receiver is bound to:

a. Promptly notify THE COMPANY of any unauthorized release of Proprietary Information;
b. To use the Proprietary Information solely for THE PURPOSE contemplated in this Agreement;
c. To protect THE COMPANY’s Proprietary Information whether in storage or in use with no less than a reasonable degree of care;
d. To disclose THE COMPANY’s Proprietary Information only to those employees for whom it may be strictly necessary for the purpose contemplated in this Agreement and only on a “need to know” basis (“Representatives”). Such disclosure to them shall be made only under equivalent conditions of strict confidentiality;

e. To immediately notify the THE COMPANY in the event that THE RECEIVER or any of its Representatives are required to disclose all or any part of THE COMPANY’s Proprietary Information under the terms of a valid and effective subpoena or order issued by a court, governmental body of competent jurisdiction or stock exchange, so that it may seek and appropriate protective order or waive the THE RECEIVER’s compliance.

FOURTH. The obligations in this Agreement shall not apply to Proprietary Information which:
i) is already in, or hereafter comes into the public domain other than through the fault or negligence of THE RECEIVER; or

ii) is lawfully obtained by THE RECEIVER from a third party with full rights of disclosure; or

iii) as shown by written records of THE RECEIVER has been independently developed by THE RECEIVER;

iv) is disclosed pursuant to THE RECEIVER validly issued administrative or judicial demand requiring it to disclose Proprietary Information.

If THE RECEIVER believes that any of those events or conditions that remove restriction on the use, disclosure and reproduction of the Proprietary Information apply, THE RECEIVER shall promptly notify THE COMPANY of such belief before acting on such belief. Unless otherwise expressly agreed between the Parties, this Agreement shall commence from the date it is signed (Effective Date) and shall terminate five years thereafter.

FIFTH. "THE RECEIVER", is bound to return or destroy to “THE COMPANY” all the documentation containing confidential information, or that related to it as required by “THE COMPANY” at the termination of this Agreement. “THE RECEIVER” may keep a copy in storage for legal matters.

SIXTH. Any modifications made to this Agreement shall be written and signed by both Parties in order to be effective.

SEVENTH. THE RECEIVER acknowledges and agrees that THE COMPANY would be irreparably injured by a breach of this Agreement, therefore, THE COMPANY may access to any remedies available at law or in equity.

EIGHTH- This Agreement shall be construed and interpreted in accordance with the laws of Mexico City, which shall have sole and exclusive jurisdiction over any dispute or lawsuit between the Parties In case of a controversy concerning this Agreement arises, both “PARTIES” commit to seek a friendly composition; only if it fails THE PARTIES would be entitled to file a lawsuit in Mexico’s City Courts. “THE PARTIES” renounce to the jurisdiction due to their domicile or any other reason could appertain.
Having the “PARTIES” acknowledged the content and legal effects of this agreement they sign it before the Witnesses, who underwrite herein, in the
_____________________ at the ___ day of the month ___________ of ______
(City, State and Country) (Number of day) (Name of Month) (Year)

______________________________
"THE COMPANY"

______________________________
"THE RECEIVER"

______________________________
"WITNESS"

______________________________
"WITNESS"
APPENDIX III

RFQ & Manufacturing Feasibility Analysis Forms
## Request for Quotation

**Quote No:**

**Quote Date:** 24-sep-12

**Required Date:** 02-oct-12

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Quote Requested To</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Quote Type Quantity:**

**Annual Volume:**

**A.T.N.:**

**Payment Terms:**

**Payment Terms for Tooling:**

**E-Mail:**

**Packaging Type Information:**

**Production Unit Price:**

**Prototype Unit Price:**

**Supplier Number:**

**Currency:**

## Additional Information

<table>
<thead>
<tr>
<th>Additional Information</th>
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</thead>
<tbody>
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<td>Raw Material:</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor:</td>
</tr>
</tbody>
</table>

TREMEC’s Considerations for Tooling Payment:

This quotation will consider that TREMEC will not make any payment in advance for developing and fabrication of the tooling needed for this project. Payment for tooling will take effect once the final customer release founds and validate final product. Requirements expressed in “Tooling Worksheet” format must be completed for validation purpose in the PPAP submittal.

**Tooling Cost (Attachment Description):** $0.00

**Tooling Lifetime:**

**Tooling Lead Time (Weeks):**

**Initial Samples Lead Time:**

**Applicant:**

**Production Parts Lead Time:**

**F.O.B. Point:**

**Raw Material Base Cost:**

**Net Weight of the Part:**

**Gross Weight of the Part:**

**Net Weight of the Part:**

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TREMEC 5F/ PE  
Level "6" – Issued Date March 02  

(*) See KUO's Supplier Quality Assurance Manual, paragraph 3.17, Global Tooling Guidelines (For Vendor Tooling) and Tooling Payment Responsibility Matrix.
**MANUFACTURING FEASIBILITY ANALYSIS - Part 1**

**Part Number:**

**Part Description:**

**Transmission Model:**

**Bill of Process**

**Design Engineering Level:**

**Quoted Price:**

New quoted price including price reduction suggestions:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Is it mandatory?</th>
<th>If answer is &quot;NOT&quot;, why not? And what are your suggestions for answer it as &quot;YES&quot;?</th>
<th>If answer is &quot;YES&quot;, what are your suggestions to cost reductions?</th>
<th>Design Change is acceptable?</th>
<th>(Why?)</th>
</tr>
</thead>
<tbody>
<tr>
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MANUFACTURING FEASIBILITY ANALYSIS - Part II

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<tr>
<th>Part # description</th>
<th>To be Filled by the Supplier</th>
<th>KUO Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>

1.- Did the supplier perform a feasibility analysis of the Process vs. the Design?  
2.- Does the supplier understand all the engineering and quality requirements?  
3.- Did the supplier take into account the implications of the special characteristics; critical characteristics (CC’s), and/or significant (SC’s) and/or standard (DR’s) for their manufacturing and control?  
4.- Did the supplier analyze the design tolerances vs the process ones before answering to a quotation?  
5.- Does the supplier count on all the machinery, measuring and test equipment required to manufacture and evaluate the part?  
6.- Does the supplier count on the KUO supplier’s Quality Assurance Manual?  
7.- Does the supplier know, clearly understand and accept to meet our specific quality requirements?  
8.- The quotation includes the accomplishment to all our specific quality requirements the sending of the annual reevaluations?  
9.- Does the feasibility analysis include the packaging and does it assure the integrity of the supplied product? (Packaging validation will be required in PPAP)  
10.- Did the supplier include the required sub-suppliers in the feasibility analysis to perform any operation and/or service or direct material supply?  
11.- Did the supplier assess and/or check the feasibility analysis of the sub-suppliers following the same concepts of this procedure?  
12.- Does the supplier have an objective evidence that a multidiscipline approach was used in such feasibility analysis?  
13.- Did the supplier envision the part manufacturing process in an schematic way (Sequence of Operations item by item) and describe the type of machinery, measuring equipment to be used, standard cost per hour per operation and available capacity of machinery?  
14.- Does the available capacity cover our required production volume? (Run @ Rate is required in PPAP running)  
15.- Does the supplier have experience in the concept of production of parts that are similar to ours?  
16.- Does the supplier know and clearly understand our identification requirements for tooling which are property of our Customers?  
17.- Were considered the applicable Legal/Government regulations?  
18.- The heat treatment processes to be used meet with CQI-9? (Evidence of the accomplishment is required)  
19.- The plating processes to be used meet with CQI-11? (Evidence of the accomplishment is required)  
20.- The coating & painting processes to be used meet with CQI-12? (Evidence of the accomplishment is required)  
21.- Is the manufacturing process feasible?  
22.- If the previous answer was “NO” which are the considerations to make the design feasible?

Suppliers' Representative Name and Signature  
KUO's Representative Name and Signature  

This document represents a commitment between the supplier and KUO Transmissions implying that the proposed design can be manufactured, assembled and shipped according to the required quality levels. Information in the form should be used as the foundation to assess the supplier’s skills and capabilities to comply with all the specified requirements. This list does not intend to contain all the required information; it is just a group of considerations that should be taken into account when performing a manufacturing feasibility assessment. Every negative answer should be supported with comments proposing changes that expedite the accomplishment of the specified requirements. Please use the attachments if you require more space for comments.
APPENDIX IV

Controlled Shipping Level I and II Forms
SUPPLIES

Supplier Top Level Name:
Title:
Company:
Location:
Supplier Number (Code):

Subject: Entry Into Level 2 Controlled Shipping

Controlled Shipping Status is a part of Suppliers Quality Assurance Manual of KUO referenced at ACP-007, and it is part of the Supplier Quality Improvement Process. KUO Facility has determined that current controls by your organization are not to insulate to (KUO Plant Name) from the receiving of nonconforming parts/material produced by your facility.

This document is a formal notification and confirms discussion held with (supplier contact and date) that your facility has been placed in Controlled Shipping Status Level 2 for the following non-conformances:

<table>
<thead>
<tr>
<th>Transmission Model Line</th>
<th>Part Number</th>
<th>Part Name</th>
<th>DMR No.</th>
<th>Nonconformance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The procedures you have enacted to date have been insufficient in stopping the flow of non-conforming material to our (KUO Plant Name). Therefore, you must immediately:

1. Pay the 100% inspection costs to a reworking supplier defined by KUO as Containment activity in addition to your current process controls.
2. Clearly identify the qualified shipments.
3. Identify the root cause of the nonconformance(s).
4. Define and implement irreversible corrective action for the root cause(s) of the problem(s). This will normally include revised FMEAs, Process Flow Diagrams, and Process Control Plan.
5. Validate effectiveness of the corrective actions. Outline your plan for reviewing your controlled shipping data.
6. Track and report your progress submitting regular reports as specified by representative of KUO monitoring this activity.
7. Meet the defined exit criteria. The parts will remain in controlled shipping status until irreversible corrective actions are implemented and confirmed. Exit criteria will be established until verify the identification of the true root cause, and verify the appropriate corrective actions are implemented, properly documented, and effective.

Note: Failure to comply this process, or the inability to implement a successful action plan or containment activity will be result in the implementation of new businesses hold. Reference the Supplier Quality Assurance Manual of KUO.

If you have any questions contact (Supplier Quality Engineer; Name, phone, Fax, E-mail), who will be monitoring and defining your Controlled Shipping Status and related activities.

Sincerely,

________________________________________________________________________

Purchasing Manager of KUO Plant

Plant, Quality Manager

Copy:

Purchasing Mgr.

Plant Manager

Supplier Quality & Development Engineering Mgr.

Incoming Quality Supervisor

Name Plant

SDE

Incoming Quality Sup.
**CONTROLLED SHIPPING CONFIRMATION REPLY**

<table>
<thead>
<tr>
<th>To:</th>
<th>(Name of SQE responsible of KUO Plant)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant Name:</td>
<td></td>
</tr>
<tr>
<td>City, state and zip code:</td>
<td></td>
</tr>
<tr>
<td>Fax Number:</td>
<td></td>
</tr>
<tr>
<td>FROM:</td>
<td>(Supplier Facility Name)</td>
</tr>
<tr>
<td>Supplier number (code)</td>
<td></td>
</tr>
<tr>
<td>Adress:</td>
<td></td>
</tr>
<tr>
<td>City, State and Zip code</td>
<td></td>
</tr>
</tbody>
</table>

We acknowledge receipt of your letter dated, ________________, advising us that our above facility has been placed in:__________

Check these (that apply):

**Controlled Shipping Level 2**

We understand the containment process requirements. We do not fully understand the containment process requirements. Please contact:

<table>
<thead>
<tr>
<th>Name of contact:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone Number:</td>
<td>_____________________</td>
</tr>
</tbody>
</table>

Following is a description of how conforming parts and shipments will be identified to indicate that they have been qualified as conforming to requirements:

<table>
<thead>
<tr>
<th>Name:</th>
<th>_____________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone:</td>
<td>_____________________</td>
</tr>
</tbody>
</table>

The containment activity will be performed at following location:

<table>
<thead>
<tr>
<th>_____________________</th>
</tr>
</thead>
</table>

The person responsible for the containment activity:

<table>
<thead>
<tr>
<th>_____________________</th>
</tr>
</thead>
</table>

Signature of person responsible for containment: _____________________  Date: ________________

---

Torque Transfer Solutions™
<table>
<thead>
<tr>
<th>Dmr No.</th>
<th>Start Date</th>
<th>First Identification Blue* dot</th>
<th>Date</th>
<th>Second Identification Blue* dot</th>
<th>Date</th>
<th>Third Identification Blue* dot</th>
<th>Date</th>
<th>Exit Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

First Certification, Comments:

Second Certification, Comments:

Third Certification, Comments:

The paint dot must be blue color until supplier guarantee 20 consecutive lots without any problem and 8D's Report is closed by KUO SQE.

Name inspector, Closed Date
### Kuo Power Systems

<table>
<thead>
<tr>
<th>Part Number:</th>
<th>Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier:</td>
<td></td>
</tr>
<tr>
<td>Supplier code:</td>
<td></td>
</tr>
<tr>
<td>Controlled Shipping Status:</td>
<td></td>
</tr>
<tr>
<td>DMR reference:</td>
<td></td>
</tr>
<tr>
<td>8 Disciplines No.</td>
<td></td>
</tr>
</tbody>
</table>

**First Following:**

<table>
<thead>
<tr>
<th>The 1,2,3 steps of 8D’s report were completed correctly?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>The containment actions were taken according to the 8D’s proposed?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>The certification was appropriate according to the requirements of DASA Facility?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>The method to certify 100% the material is capable to assure &quot;zero&quot; defective parts at KUO Plant?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>The lots shipped to the KUO Plant were certified and identified according to our procedures?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**KUO SQE Recommendations:**

---

---
| Part Number: |  |
| Name: |  |
| Supplier: |  |
| Supplier code: |  |
| Controlled Shipping Status: |  |
| DMR reference: |  |
| 8 Disciplines No. |  |

Second Following:

| The root cause(s) was (were) found and identified clearly? | Yes | No |
| The supplier used an appropriate technique to identify the root cause(s)? | Yes | No |
| Has the supplier defined an action plan to implement the Corrective Actions? | Yes | No |
| Those Corrective Actions have been implemented on similar process or parts? | Yes | No |

KUO SQE Recommendations:

|  |
|  |
|  |
|  |
|  |
|  |

Page 2
## SUPPLIES

<table>
<thead>
<tr>
<th>Part Number:</th>
<th>Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier:</td>
<td>Supplier code:</td>
</tr>
<tr>
<td>Controlled Shipping Status:</td>
<td>DMR reference:</td>
</tr>
<tr>
<td>8 Disciplines No.</td>
<td></td>
</tr>
</tbody>
</table>

### Third Following:

The Corrective Action (s) has (have) been implemented? [ ] Yes [ ] No

The Corrective Action(s) is (are) enough to assure “zero” defective parts at KUO Plant? [ ] Yes [ ] No

The Corrective Action(s) was (were) completed on time and with enough resources? [ ] Yes [ ] No

The Corrective Action(s) required modify the next documentation in process, or design? [ ] Yes [ ] No

<table>
<thead>
<tr>
<th>*Process FMEA</th>
<th>Last Level:</th>
<th>New Level:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>*Control Plan</th>
<th>Last Level:</th>
<th>New Level:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>*Process Sheet</th>
<th>Last Level:</th>
<th>New Level:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>*Visual Aids</th>
<th>Last Level:</th>
<th>New Level:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>*Engineering Drawing</th>
<th>Last Level:</th>
<th>New Level:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**KUO SQE Recomendations:**

---

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As representative personal of [Name of KUO Plant] I confirm that all actions were taken by [Supplier Name] fulfilling with all requirements of Quality to assure good parts at own facilities. I confirm that all actions were taken using a development of a global 8D’s process and the actions were verified at Supplier’s Facilities.

---

**Supplier Quality Representative**

**KUO Supplier Quality Engineer**

---

**Note:**
The cost by inspection, sorting or returning of parts to your facilities will be charged at your debit account, each cost will be displayed on a formal memo at your account department.

---

Copy:
KUO Purchasing Manager:
Plant Manager:
KUO SQE:
KUO Incoming Quality Sup.:
APPENDIX V

Identification of New Production Lots Form
FIRST PRODUCTION RUNNINGS

AFTER PPAP APPROVAL

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

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
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<td>32</td>
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<td>37</td>
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<td>42</td>
<td>43</td>
<td>44</td>
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<td>45</td>
<td>46</td>
<td>47</td>
<td>48</td>
<td>49</td>
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<td>51</td>
<td>52</td>
<td>53</td>
<td>54</td>
<td>55</td>
<td>56</td>
<td>57</td>
<td>58</td>
<td>59</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

- [ ] DRAWING ENGINEERING CHANGE
- [ ] NEW PART NUMBER
- [ ] NEW SUPPLIER FOR THIS PART NUMBER
APPENDIX VI

Tooling Worksheet and Visual Aid Form
(For Tooling Identification Property of Customer)
# Tooling 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.

**Program/Project**

**Customer Name**

**Customer PO/Contract Number**

**Customer Tool Number**

**TREMEC PO Number**

**TREMEC Assembly part number**

**TREMEC Component Part Number**

**TREMEC Component Part Name**

**Example:**

2012 Camaro SS or 2011 Corvette EWO 12453

* This information must be part of the Tooling ID.

## Tool Category

<table>
<thead>
<tr>
<th>Tool Type</th>
<th>Die</th>
<th>Mold</th>
<th>Fixture</th>
<th>Machine Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progressive Extrusion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Die Cast</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trimming Die</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line Die</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compression</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vacuum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blow</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Checking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machining</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Please describe)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cutting/machining</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other: (Please describe type)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Tool Information

1. **Put an X in the right box**

2. **Tool Category**

3. **Daily capacity for the tool**

4. **Country of Origin for the tool**

5. **Tool location (street address)**

6. **Length**

7. **Heigh**

8. **Width**

9. **Weight**

10. **Tool material** (Steel, aluminum, etc.)

---

**This information is needed for EACH tool as designated on the Tooling PO.**
Visual Aid for Tooling Identification:

PROPERTY OF GENERAL MOTORS

| TOOL NO.  | 53753-36-A |
| PART NAME | INTERLOCK  |
| PART NO.  | TCTP11454  |
|           | TREMEC     |

6.0 in

1.0 in

3.0 in

2.5 in
APPENDIX VII

Production Demonstration Run Calculation Worksheet
**PRODUCTION DEMONSTRATION RUN**

**KUO REQUIREMENT**

<table>
<thead>
<tr>
<th>PART NAME(S)</th>
<th>SUPPLIER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PART NUMBER(S)</th>
<th>MANUFACTURING LOC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHANGE LEVEL(S)</th>
<th>SUPPLIER CODE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Buyer concurrence (optional)**

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Witnessed information</th>
<th>Input information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Data input from production P.O.:**

- Shared Machine? Yes or No (Y/N)
  - [ ] Yes
  - [ ] No

**A) Combined KUO P.O. Daily Required Capacity**

<table>
<thead>
<tr>
<th>A1</th>
<th>KUO P.O. Daily Required Capacity</th>
<th>Part Number</th>
<th>Pieces/day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A2</th>
<th>KUO P.O. Daily Required Capacity</th>
<th>Part Number</th>
<th>Pieces/day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A3</th>
<th>KUO P.O. Daily Required Capacity</th>
<th>Part Number</th>
<th>Pieces/day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A4</th>
<th>KUO P.O. Daily Required Capacity</th>
<th>Part Number</th>
<th>Pieces/day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A5</th>
<th>KUO P.O. Daily Required Capacity</th>
<th>Part Number</th>
<th>Pieces/day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total (A1 + A5):**

<table>
<thead>
<tr>
<th>Pieces/day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

**B) KUO P.O. Shift Pattern**

- **B1** Number of shifts per day: 
  - [ ]
- **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:** 
  - [ ] hours
- **Finish:** 
  - [ ] hours

**G) Acceptable parts witnessed at the PDR**

- [ ] pieces

**In process calculations:**

- **H** Available production hours/shift: 
  - [ ] B2-(C1+C2+C4+C5) hours/shift

- **I** Available production hours/day: 
  - [ ] B1*H hours/day

- **J** KUO required parts per hour at the PDR: 
  - [ ] #DIV/0! parts/hour

- **K** Witnessed parts per hour at the PDR: 
  - [ ] #DIV/0! parts/hour

**Requirements:**

- **L** FTC calculation: 
  - [ ] #DIV/0! Minimum requirement of 90%

- **M** Difference between witnessed parts/hour and required parts/hour: 
  - [ ] #DIV/0! pieces

**Must be 0 or greater for approval**