

# ISO/TS 16949 Update

Mrs. Cherie Reiche
International Automotive Oversight Bureau (IAOB)

September 2015

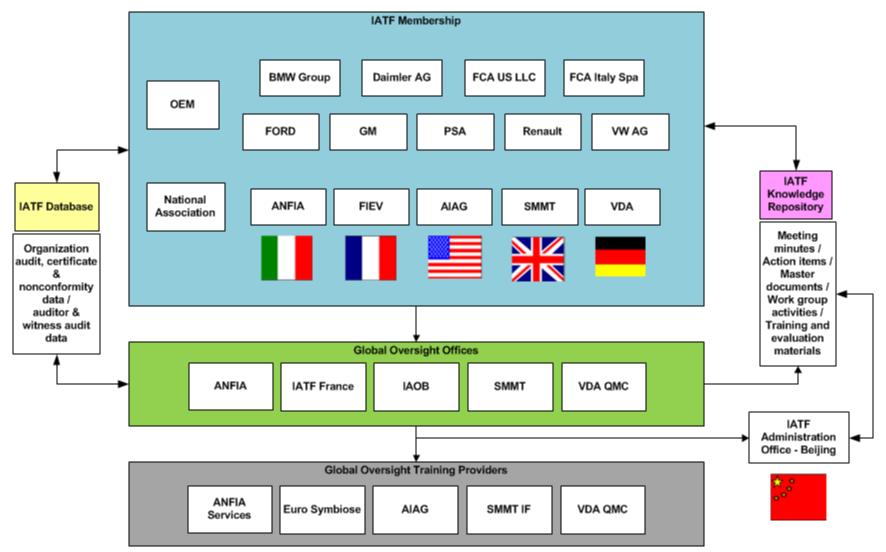
### IATF Structure



- The IATF (International Automotive Task Force) is the recognizing body for ISO/TS 16949 accreditation worldwide
  - Global Oversight is accountable to the IATF
  - Currently, 44 Certification Bodies contract with the 5 IATF Global Oversight Offices
  - Global Oversight monitors Certification Body activities (witness audits conducted and maintenance of auditor credentials)
- Listing of the IATF-recognized CBs is available at: http://www.iatfglobaloversight.org/certBodies.aspx
- Only certificates issued by an IATF-recognized CB are valid ISO/TS 16949 certificates

### IATF Scheme Management Structure

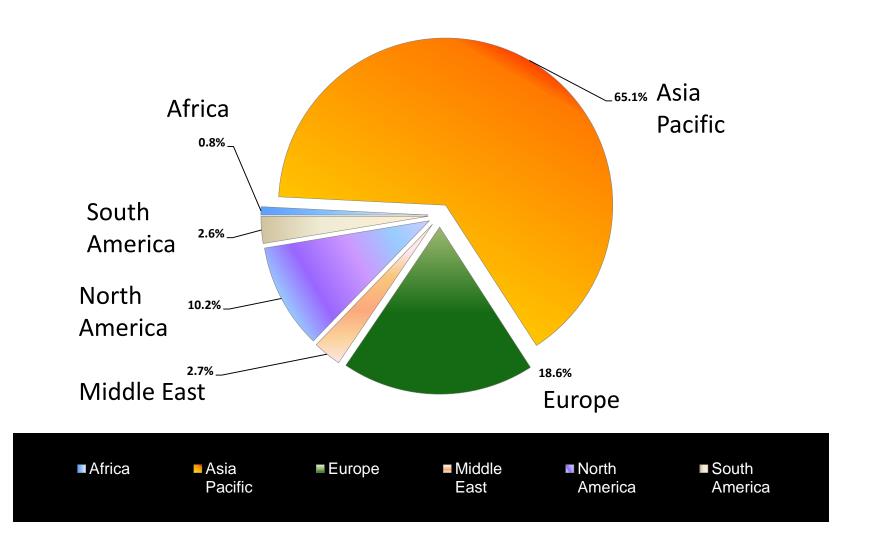




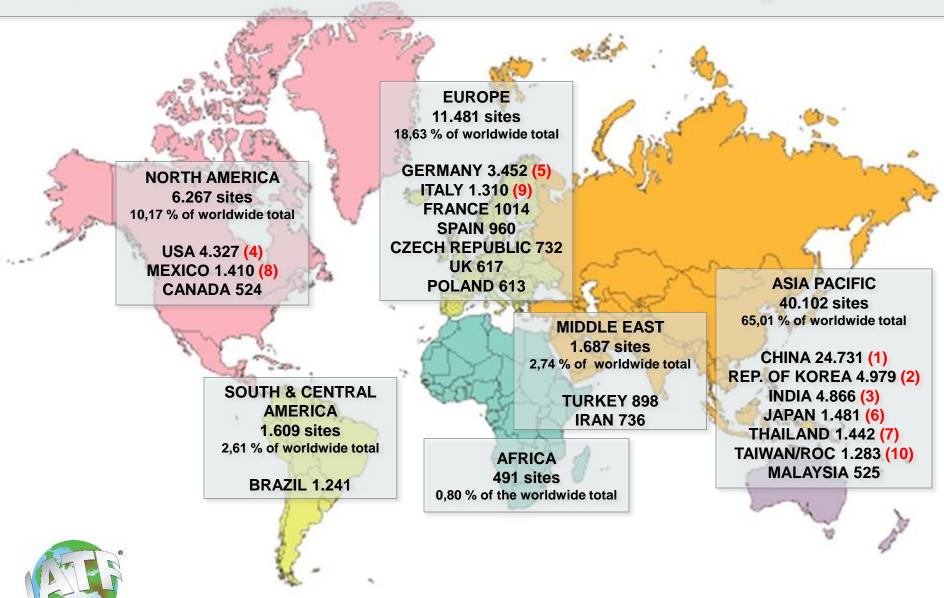
## Percent Regional Certificate Distribution



#### **Valid Certificates per Region** [%]



### 61,642 ISO/TS 16949 certified sites as of 31st August 2015







Oversight	No. CBs	Certificate Count	Percentage (%)
ANFIA (Italy)	2	1,661	2.7
<i>IAOB</i> (USA)	20	19,942	32.4
IATF France (France)	3	1,974	3.2
<b>SMMT</b> (England)	6	11,930	19.4
VDA QMC (Germany)	13	26,134	42.4
Total	44	61,642	100

### IATF Strategies & Concerns



- Continue strengthening the value and credibility of TS 16949 certification
  - Improve alignment between supplier performance and TS certification
  - Emphasize Performance Feedback from Customers (OEMs and Upper Tier Suppliers) during audits, veto power reviews, and certificate decisions
  - During CB Office Assessments, the IATF is
    - Looking for evidence of soft auditing (pattern of little to no nonconformities) and soft scoring (pattern of issuing minors and no majors) over time
    - Watching for differences in the number and type of nonconformities between non-witnessed and witnessed audits
  - Certificate decisions must ultimately be based on merit, not "everyone gets one"
    - If performance is weak or lacking, the organization can lose their certification

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### Value & Credibility

- IATF OEMs and Global Oversight members look at the linkage between ISO/TS 16949 Certification and Supplier/Client <u>quality performance</u>
  - Increased focus on operational performance and customer feedback (customer scorecards/metrics)
  - The IATF is giving support to Certification Bodies to make the right decisions (the "tough calls")
    - Major vs. minor non-conformity
    - Certificate suspension or withdrawal

## Value & Credibility



- OEMs are raising the bar regarding expectations for audits to reflect <u>systemic weaknesses</u> that affect supplier/client performance
- OEMs support increased observation audits and special audits where there is a perceived mismatch between supplier performance and supplier certification status (or increased risk)
  - Goal = Prevent problems before they occur

## Value & Credibility



- The Automotive Supply Base has changed dramatically
  - Suppliers have responded to global competition and significant economic challenges
  - The global footprint reflects the dynamic changes
  - TS certificate growth has been largely in Asia Pacific
- In response, Key Stakeholders expect more from TS 16949
  - Compliance to the standard is a requirement It has become the price of entry
  - Expectations are that poor performing suppliers should not be TS Certified

So let's take a look at our areas of weakness ....

# Top 10 Nonconformities



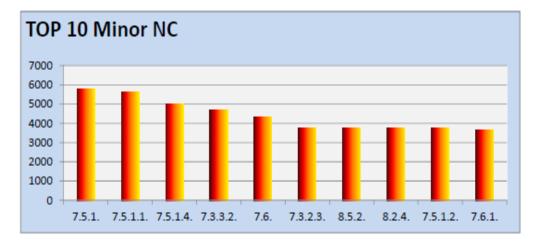
(by ISO/TS clause – global)

	ISO/TS Clause	Major NC
Corrective Action	8.5.2.	1109
Monitoring/Meas	8.2.4.	404
Internal Audit	8.2.2.	327
Cntrl Prod/Servicing	7.5.1.	320
Monit/Meas Equip	7.6.	312
Control Plan	7.5.1.1.	271
Mfg Proc Design	7.3.3.2.	234
Meas Sys Analys	7.6.1.	216
Mon/Meas Mfg	8.2.3.1.	212
Prev/Predict Main	7.5.1.4.	167

ТОР	10 N	1ajor	NC							
1200 -										
1000 -	_									
800 -	-									
600 -	_									
400 -	-									
200 -	-	_	-	-	-	-	-		-	_
0 -										
	8.5.2.	8.2.4.	8.2.2.	7.5.1.	7.6.	7.5.1.1.	7.3.3.2.	7.6.1.	8.2.3.1.	7.5.1.4.

Cntrl Prod/Servicing
Control Plan
Prev/Predict Main
Mfg Proc Design
Monit/Meas Equip
Special Charact
Corrective Action

	ISO/TS Clause	Minor NC
Cntrl Prod/Servicing	7.5.1.	5777
Control Plan	7.5.1.1.	5620
Prev/Predict Main	7.5.1.4.	5015
Mfg Proc Design	7.3.3.2.	4728
Monit/Meas Equip	7.6.	4334
Special Charact	7.3.2.3.	3785
Corrective Action	8.5.2.	3776
Monitoring/Meas	8.2.4.	3754
Work Instructions	7.5.1.2.	3744
Meas Sys Analys	7.6.1.	3689





## IATF Strategies & Concerns

- Revise TS 16949 based on ISO 9001:2015 structure and boxed text
- Develop common audit report template including follow-up audits and upload into the IATF database
- Continue focus on rapidly growing TS certification in Asia Pacific, primarily China
- Utilize OEM Directed Witness Audits to enhance supplier performance, new processes, new supplier, and launch readiness

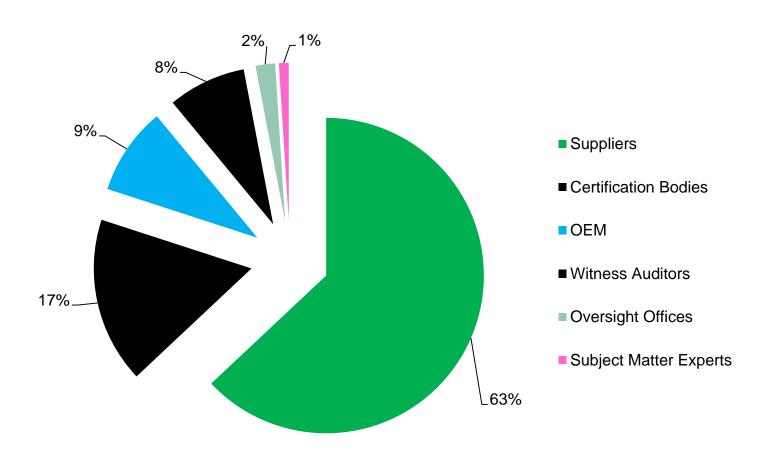
### ISO/TS 16949 Revision Process



- IATF launched a survey (via the National Associations) early June 2015 soliciting feedback from over 2,000 key stakeholders:
  - OEMs
  - Suppliers (all Tiers)
  - Certification Bodies
  - Witness Auditors
  - Subject Matter Experts
  - Oversight Offices
- Over 1,700 comments were received for consideration of updates to ISO/TS 16949
- Timing for release of draft materials to be determined

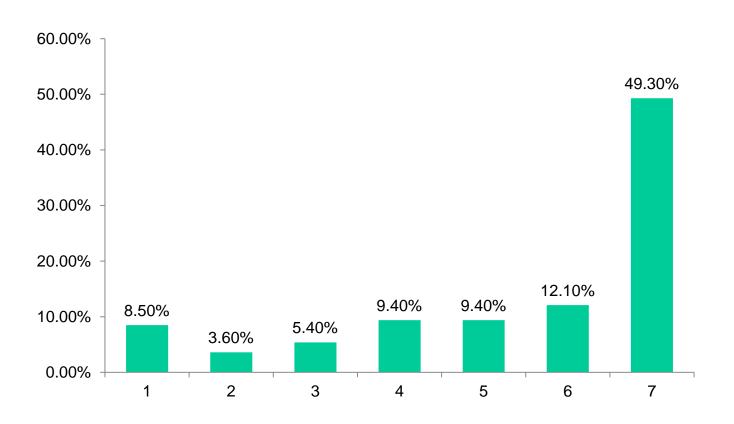


# **Survey respondents**



# Harmonization of CSR & Inclusion in the standard

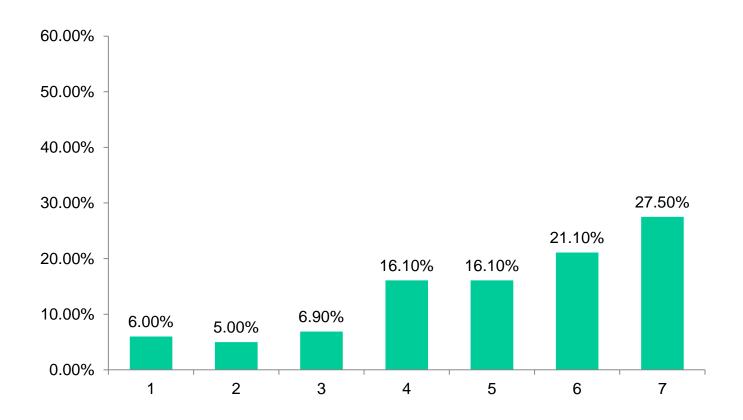




Prioritization 1 = lowest / 7 = highest

### **Harmonization of Core Tools**

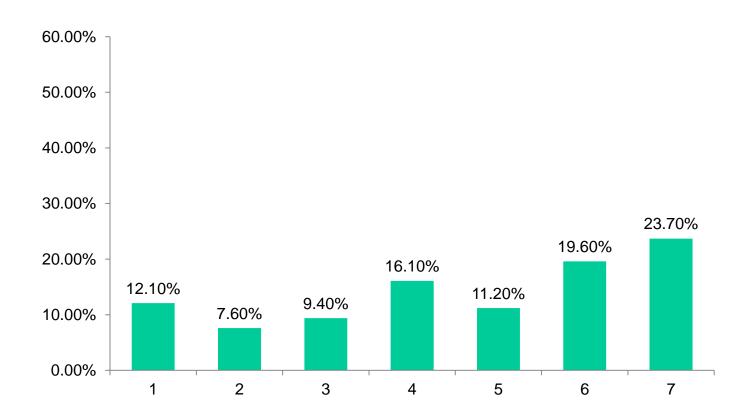




Prioritization 1 = lowest / 7 = highest

# Harmonization of internal audit process methodologies

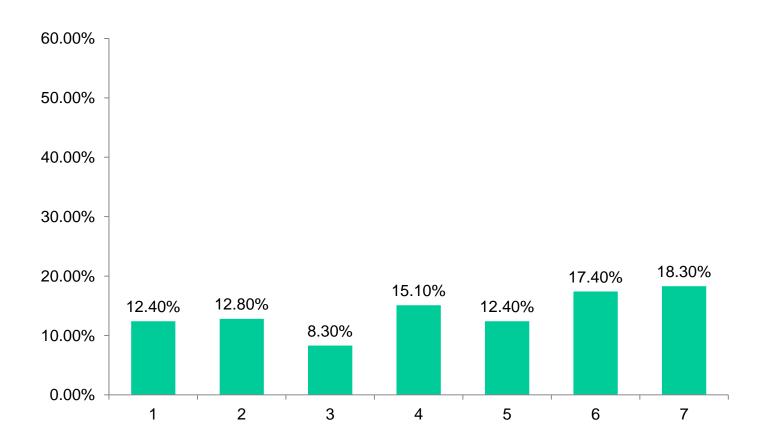




Prioritization 1 = lowest / 7 = highest

# Specific requirements for sub-tier suppliers

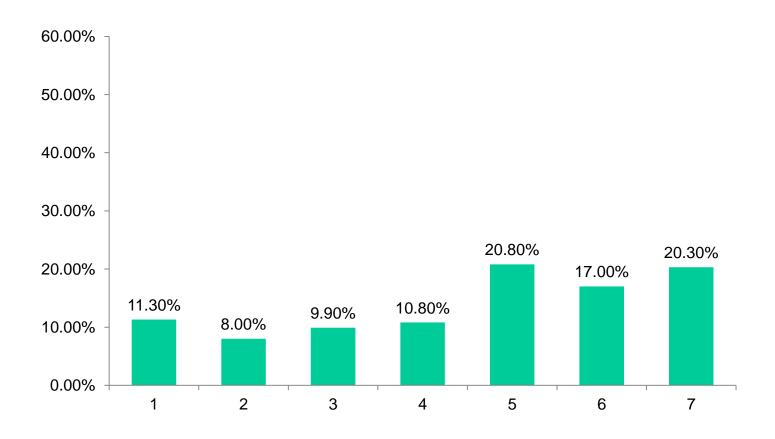




Prioritization 1 = lowest / 7 = highest

# Improve correlation between audit results and lack of performance

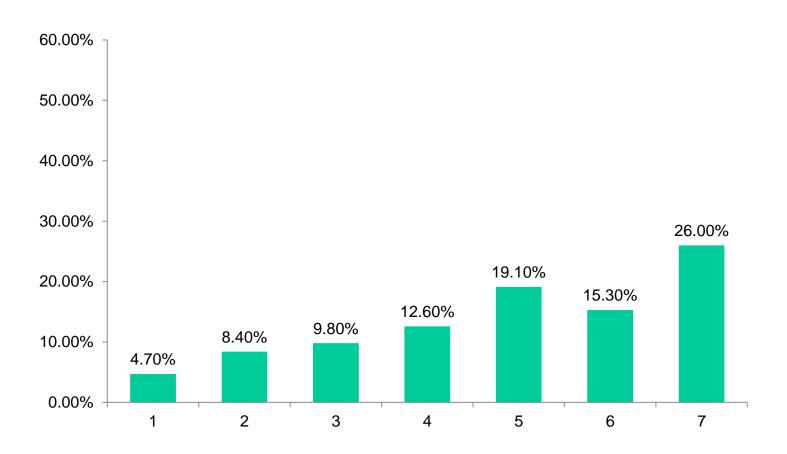




Prioritization 1 = lowest / 7 = highest

## Improvement of IATF Rules



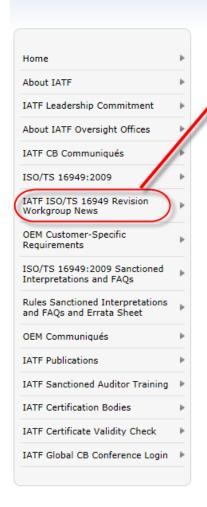


Prioritization 1 = lowest / 7 = highest

#### Please stay tuned to the IATF Global Oversight website for updates: http://www.iatfglobaloversight.org/content.aspx?page=IATF ISO/TS 16949 Revision Workgroup News







#### IATF ISO/TS 16949 Revision Workgroup News

#### 24 July 2015

The IATF has completed a stakeholder survey for suggestions related to content changes to the revised IATF standard. The established work team is now compiling the survey responses and preparing for the build phase of the revision process. Thank you to those who participated in the survey.

#### 30 Mar 2015

The IATF has completed phase one of the development process and finalized the design specification for the revision of the IATF automotive standard. Efforts are being undertaken to collect data for analysis and potential inclusion into the revised standard. A standardized common survey will be administered by the IATF member national associations to stakeholders in the coming months.

#### 16 Feb 2015

The IATF assigned work team will be seeking stakeholder inputs on potential enhancements to the ISO/TS 16949 standard. Additionally, customer requirements are being analyzed for potential inclusion in the future standard. Completion of the revised quality management system standard is targeted for Q4 2016.

#### 5 Dec 2014

The IATF has established a work team consisting of IATF member organizations to develop a design specification for the revision of ISO/TS 16949 to align with the ISO 9001:2015 based structure and requirements.

# INTERNATIONAL AUTOMOTIVE OVERSIGHT BUREAU

## Summary

- Stay focused on value and credibility of ISO/TS 16949
- ISO/TS 16949 revision process on-going stay tuned to the Global Oversight website for updates
- Rapid growth of the automotive supply base in the Asia Pacific region is of key importance to the IATF
  - Asia Pacific region Deep Dive Audits
  - Increased Witness Audits
- Further strengthen the performance linkage among OEMs, Suppliers (all tiers), CBs, and Oversight Offices

Focus the Supply Base on more opportunities for <u>systemic problem solving – preventing problems upfront</u>



# Thank you!



# Ford Motor Company FORD CUSTOMER SPECIFICS UPDATE

**Russ Hopkins** 

# Ford Customer Specifics Update



- To improve clarity of requirements and the audit process, the Ford ISO/TS 16949 customer requirements have been updated to link more directly with ISO/TS 16949 requirements showing direct clause linkage and if there are no customer specifics for a particular clause
- Uses the same approach as the GM and FCA US LLC customer specifics
- This summary highlights the major changes
- The updated customer specifics are available through the Global Oversight web page



- Updates effective 1 November 2015
- Clear table of contents showing ISO/TS 16949 sections which have customer specifics
- Clearer documentation of ISO/TS 16949 requirements in line with common customer specifics format
- Common format and structure of references
  - AIAG references
  - Ford references
  - Other sources of references



- ISO/TS requirement 4.2.4 Control of Records
  - Records of process control data, product inspection data and records of appropriate reaction actions to readings outside the specification shall be retained in a recoverable format for a minimum of 2 years, available to Ford Motor Company upon request.
- ISO/TS requirement 6.3.1 Plant, Facility and Equipment Planning
  - Capacity Planners are to review the Capacity Analysis training annually. If the Capacity Analysis training is updated, Capacity Planners are required retake the Capacity Planning training and to re-register in the capacity Supplier Directory
- ISO/TS requirement 7.3.1.1 Multidisciplinary approach
  - FMEAs and Controls Plans shall ensure that the manufacturing process complies with Critical to Quality process requirements as specified in the Supplier Manufacturing Health Charts



- ISO/TS requirement 7.3.6.3 Product Approval Process
  - For service parts, in addition to meeting the requirements of the AIAG published Production Part Approval Process (PPAP) manual, the organization must comply with the AIAG published Service Production Part Approval Process (Service PPAP) manual.
- ISO/TS requirement 8.2.2.2 Manufacturing Process Audit
  - The tier 1 supplier is responsible to ensure that all tiers of suppliers are assessed to the applicable Ford manufacturing process standards.
  - Refer to https://web.qpr.ford.com/sta/Ford\_GTS.html on Ford Supplier Portal for all these standards except AIAG CQI-xx, which are available through AIAG.
  - Compliance to Critical to Quality process requirements will be assessed in accordance with APQP as specified in the Supplier Manufacturing Health Charts



- ISO/TS requirement 8.2.4.1 Layout Inspection and Functional Testing
  - Where tooling has multiple cavities, tools or centers, the annual layout is conducted on at least one part from each cavity, tool or center, with a minimum overall sample of 5 parts.
  - Note: 5 parts are not required from each cavity; tool or center, only a minimum of 1 part is required from each cavity, tool or center.



The majority of ISO/TS requirements do not have customer specifics

Section	Without CSRs	With CSRs
4 Quality management system	4	3
5 Management responsibility	13	4
6 Resource management	9	4
7 Product realization	34	23
8 Measurement, analysis and improvement	21	13



# ISO/TS 16949 Update

James Bruin

Manager - Mopar Supplier Quality

2015 Quality Summit (Novi, Michigan) September 22-23, 2015















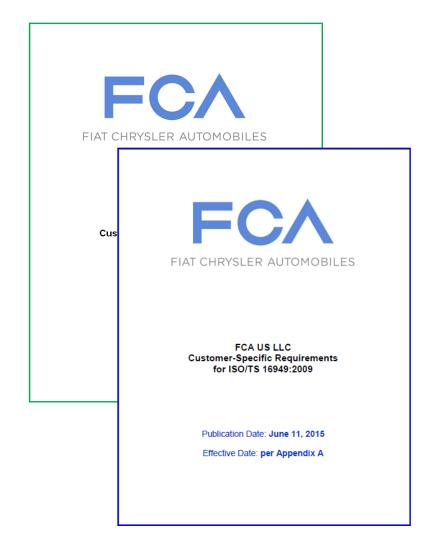




#### Since the last summit...



There have been two releases of the Customer-Specific Requirements (CSR) since the September, 2014
Quality Summit





# Editorial changes only; no new technical requirements

- Chrysler announced that legal name changed to "FCA US LLC" on 12/16/14
- All references to "Chrysler" in CSR changed to suit

Note that documents referenced in the CSR that still say "Chrysler" are valid and applicable



FCA US LLC Customer-Specific Requirements for ISO/TS 16949:2009

December, 2014

### June 11, 2015 release



# Editorial <u>and</u> technical changes

- New process for change tracking
- New certification requirements for Mopar suppliers
- Supplier Quality Management
   System Development
   requirements updated
- Associated warranty
   management requirements
   updated
- MMOG/LE requirements added



FCA US LLC Customer-Specific Requirements for ISO/TS 16949:2009

Publication Date: June 11, 2015

Effective Date: per Appendix A



# New process for change tracking

- Publication and effective dates are displayed on cover page
- Editorial changes and/or a single are effective on date shown
- Multiple technical changes have individual effective dates displayed in Appendix A

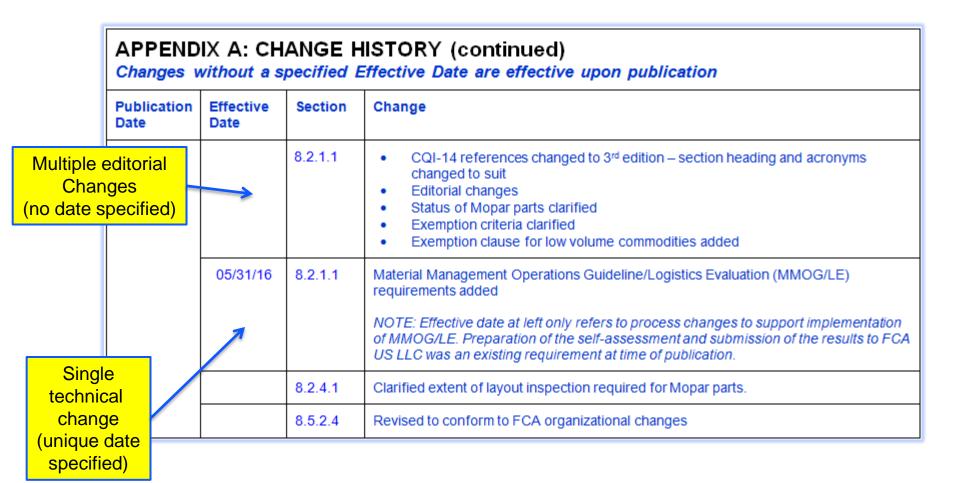


FCA US LLC Customer-Specific Requirements for ISO/TS 16949:2009

Publication Date: June 11, 2015
Effective Date: per Appendix A



### New process for change tracking





#### **New certification requirements for Mopar suppliers**

- ISO/TS 16949 certification is required for suppliers of service and remanufactured ("reman") parts
- ISO 9001 certification is required for suppliers of:
  - Valueline parts
  - Accessory parts
  - Essential chemicals
  - Marketing chemicals



All ISO 9001 certifications shall be administered through a registrar recognized as an IATF Certification Body by September, 2018.

Certification is nor required of suppliers who only provide Performance parts

#### June 11, 2015 release



## Associated warranty management requirements updated

- Process document (CQI-14) updated to 3<sup>rd</sup> edition
- The all references changed to reflect the new name: "Automotive Warranty Management:
- Status of Mopar parts clarified any Mopar part installed on vehicle at time of sale is considered a warrantable part
- Exceptions now available for lowvolume commodities

#### **CQI-14**

Automotive Warranty Management: A Guideline for Industry Best Practices 3<sup>rd</sup> Edition







## Supplier Quality Management System Development requirements updated

- Clarified the criteria for prioritizing Supplier Development
- Simplified audit length requirements for ISO 9001 certified suppliers
- Added requirement for suppliers who ship directly to FCA US LLC plants



## Material Management Operations Guideline/Logistics Evaluation (MMOG/LE) requirements added

- Use of MMOG/LE Version 4 to integrate evaluation of delivery performance into QMS required within one year of CSR publication (5/31/16)
- Minimum requirements for supplier-managed process summarized
- Self-assessment submissions to DRIVe due by 7/31/15

Note that preparation and submission of a MMOG/LE self-assessment is an existing requirement – the CSR revision makes this requirement auditable!

#### In closing, please remember...



## FCA US LLC continues to leverage the ISO/TS 16949 audits to drive quality improvement

- Supplier EBSC performance data is shared with Certification Bodies
- Summarized audit results are available to Supplier Quality Engineers
- Use of Directed Witness Audits will continue



















GENERAL MOTORS





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Revised record retention
Purpose – Document Control

#### 4.1.2 Records Retention

Supplier Business records shall be retained as specified in GMW15920 (3<sup>RD</sup> Party).

<u>Added Plastic Molding self assessment using AIAG CQI-23</u> Purpose – Ref. CQI-23

#### 4.1.15 Plastics Molding Processes

Clause 8.2.2.2 of ISO/TS 16949:2009 requires that the organization shall audit each manufacturing process to determine its effectiveness. Applicability and effectiveness of plastics molding processes shall be determined utilizing the most current version *CQI-23 Special Process: Molding System Assessment (CSA)*, published by AIAG, and records maintained. The effectiveness evaluation shall include the organization's self-assessment, actions taken, and that records are maintained.



#### <u>Added Solder Process Requirements</u> Purpose – New Requirement

#### 4.1.16 Solder Processes

Clause 8.2.2.2 of ISO/TS 16949:2009 requires that the organization shall audit each manufacturing process to determine its effectiveness. Applicability and effectiveness of the solder processes shall be determined utilizing the most current version CQI-17 Special Process (Currently version 1), Soldering System Assessment (CSA), published by AIAG, and records maintained. The effectiveness evaluation shall include the organization's self-assessment, actions taken, and that records are maintained.

This requirement shall also apply to sub tier suppliers to the organization that provide product manufactured using the techniques described in section 1.2 of the CQI-17 assessment pursuant to ISO/TS 16949:2009 Clause 7.4.1.2 (supplier development clause).

NOTE 1: 2nd Party assessment by a competent auditor and meeting the above requirements will satisfy the self-assessment requirement.

NOTE 2: Implementation effectiveness should be based on evidence that the organization has a process in place that includes elements such as auditors identified, schedule for self-assessment in place including schedule adherence, supplier development process identified for applicable suppliers, monitoring of progress, defined corrective action process and record-keeping.



- Added 4.1.17 4.1.29
- Purpose GM New BIQS Supplier Audit (13 elements)
- 4.1.17 Nonconforming Material/Material Identification (Reference ISO/TS16949 clause 8.3)
- 4.1.18 Layered Audit (Reference ISO/TS16949 clause 8.2)
- 4.1.19 PFMEAs (Reference ISO/TS16949 clauses 7.3.1.1; 7.3.2.2; & 7.5.1.1)
- 4.1.20 PFMEAs Risk Reduction & Annual Review (Reference ISO/TS16949 clauses 7.3.1.1; 7.3.2.2; & 7.5.1.1)
- 4.1.21 Bypass Management (Reference ISO/TS16949 clause 8.2.2.2 & 8.5.2.2)
- 4.1.22 Error proofing Verification (Reference ISO/TS16949 clauses 7.5.1.1 & 8.5.2.2)
- 4.1.23 Gage Calibration / Measurement System Analysis (Reference ISO/TS16949 clause 7.6 & 8.1)
- 4.1.24 Fast Response Problem Solving Process (Reference ISO/TS16949 clause 8.5.2.1)
- 4.1.25 Team Problem Solving (Reference ISO/TS16949 clauses 8.4.1 &



#### Added 4.1.17 – 4.1.29 (GM BIQS Audit)

- 4.1.26 Quality Focused Checks (Reference ISO/TS16949 clauses 8.2.1.1 & 8.2.2.3)
- 4.1.27 Standardized Work (Reference ISO/TS16949 clause 7.5.1.2)
- 4.1.28 Process Change Control (Reference ISO/TS16949 clause 7.1.4)
- 4.1.29 Verification Station/Final Inspection /CARE / GP12 (Reference ISO/TS16949 clause 7.1.2)

#### Added a Note to Service PPAP application

#### **Purpose – Clarification**

#### 5.1 Applicability

<u>NOTE:</u> PPAP 4th Edition (or most current edition) shall apply to organizations providing service parts to GM unless otherwise specified by an authorized GM Service Parts Organization (GMSPO) representative that the application of the Service Production Part Approval Process (Service PPAP) Manual can apply.



## Revised PSW Part Number Requirements Purpose – Multiple Part Number Submission

### 5.2.1 PSW Form (CFG-1001and Appendix A) (See PPAP 4<sup>th</sup> Edition Section 2 PPAP Process Requirements 2.2.18)

1. Multiple part numbers can be submitted on the PSW, or on a separate attached sheet, as long as all information on the PSW applies to all part numbers listed.

Revised marked drawing status

Purpose – Marked Drawing Saleable PPAP Status ONLY

5.2.5 Design Records (See PPAP 4<sup>th</sup> Edition Section 2, Design Records 2.2.1)

 A marked drawing can be used for PPAP submission provided the drawing is signed by the GM Lead Engineer, contains an EWO number and is dated. A marked drawing can be used to achieve up to a Saleable PPAP status. A complete drawing is required for Approved PPAP status.



<u>Updated IMDS Requirements</u> Purpose - IMSD Required for all Components Globally

5.2.7.1 International Material Data System (IMDS) (See PPAP 4<sup>th</sup> Ed., PSW Appendix A)

The International Material Data System (IMDS) is to be used by Tier 1 supply organizations to report material content information. IMDS reporting is required for all GM components globally. The IMDS requirements are:

Removed GM1411 Worksheet and Instructions

Purpose – Document Control

5.4.1 GM1411 Worksheet and instructions

<u>Added Users to use GM Supply Power link</u> Purpose – Document Control

5.5 PPAP Worksheet GM 1411

The PPAP Worksheet can be found in GM Supply Power as document 1927-09 GM 1411 PPAP Worksheet.

Insight. Expertise. Results.



# GM Built-In-Quality Supply based (BIQS) Supplier Audit Overview

## **BIQS 29 Elements Proven Elements of a Solid Manufacturing System**

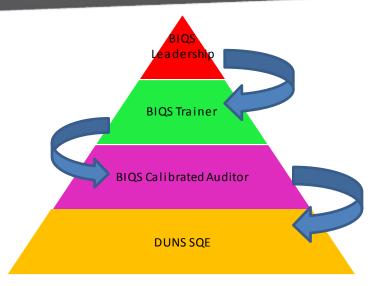


BIQS -1	Nonconforming Material / Material Identification
BIQS-2	Layered Audit
BIQS-3	PFMEAs
BIQS-4	PFMEAs - Risk Reduction & Annual Review
BIQS-5	Bypass Management
BIQS-6	Error proofing Verification
BIQS-7	Gage Calibration / Measurement System Analysis
BIQS-8	Fast Response Problem Solving Process
BIQS-9	Team Problem Solving Process
BIQS-10	Quality Focused Checks
BIQS-11	Standardized Work
BIQS-12	Process Change Control
BIQS-13	Final Inspection / GP12
BIQS-14	Change Control - Production Trial Run (PTR)

BIQS-15	Andon System Implementation
BIQS-16	Alarm and Escalation
BIQS-17	Visual Controls
BIQS-18	Visual Standards - Communicated and Understood
BIQS-19	Process Control
BIQS-20	Process Control Plan Implemented
BIQS-21	Process Capability Review
BIQS-22	Rework / Repair Confirmation
BIQS-23	Feedback / Feedforward
BIQS-24	Training
BIQS-25	Contamination/Handling Requirements
BIQS-26	Maintenance
BIQS-27	FIFO Process
BIQS-28	Shipping Approved Packaging
BIQS-29	Supply Chain Management

## BIQS Calibration Structure Defined BIQS Roles



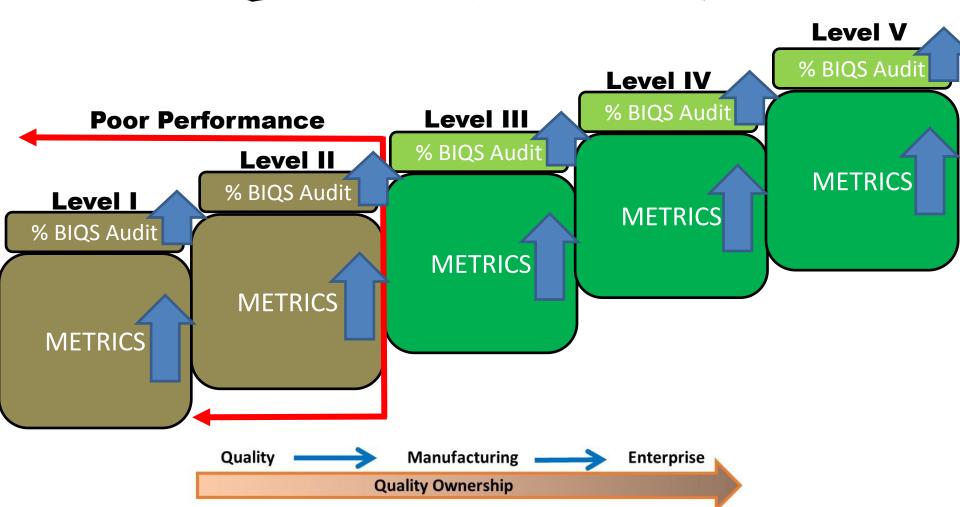


- ➤ <u>BIQS Calibrated Auditors</u> will conduct the official BIQS audit at all suppliers globally.
- ➤ <u>Duns SQE's</u> responsibilities will remain the same other than they will not issue the Official BIQS Audit Certification to the supplier, but they will be expected to help the supplier close gaps found.

#### **GM – BIQS Audit Structure**









#### GENERAL MOTORS

#### Who We Are and Why We Are Here

We earn customers for life.

Our brands inspire passion and loyalty.

We translate breakthrough technologies into vehicles and experiences that people love.

We serve and improve the communities in which we live and work around the world.

We are building the most valued automotive company.

#### **Our Core Values**

#### CUSTOMERS

We put the customer at the center of everything we do. We listen intently to our customers' needs. Each interaction matters. Safety and quality are foundational commitments, never compromised.

#### RELATIONSHIPS

Our success depends on our relationships inside and outside the company. We encourage diverse thinking and collaboration from the world to create great customer experiences.

#### EXCELLENCE

We act with integrity. We are driven by ingenuity and innovation. We have the courage to do and say what's difficult. Each of us takes accountability for results and has the tenacity to win.