

 FIAT CHRYSLER AUTOMOBILES	SAFE LAUNCH PLAN (SLP)	SQ.00009
		Supplier Quality
		Page: 1/11
		Date: 14-MAR-2018

Globally Harmonized Document

Change level	Date	Description of change
-	14-MAR-2018	Initial release

For Information, please contact the following references:

Region	Surname Name	Phone number / e-mail address	Department
EMEA	Giovanni M De Santis	+390110031549 / giovanni.m.desantis@fcagroup.com	Group Purchasing
NAFTA	John Opie	+1 (248) 512-1594 / john.opie@fcagroup.com	P&SQ Processes, Methods, and Program Management
LATAM	Alessandro Nonaka	+55 3121232971 / alessandro.nonaka@fcagroup.com	SQ Business Process
APAC China	Alice Chen	+86 21 3996 2288 ext.2780 / Alice.CHEN@fcagroup.com.cn	P&SQ Strategic Planning & Communication
APAC India		Not available	
ALFA_MASERATI		Not available	

ANY PRINTED COPY IS TO BE DEEMED AS UNCHECKED; THEREFORE THE UPDATED COPY MUST BE CHECKED IN THE APPROPRIATE WEB SITE

CONFIDENTIAL
 THIS DOCUMENT MUST NOT BE REPRODUCED OR CIRCULATED TO THIRD PARTIES WITHOUT PRIOR WRITTEN CONSENT BY THE RELEVANT FCA COMPANY.
 IN CASE OF DISPUTE, THE ONLY VALID REFERENCE IS THE ENGLISH EDITION

SAFE LAUNCH PLAN (SLP)

TABLE OF CONTENTS

1 GENERAL 3

1.1 Purpose 3

1.2 Coverage of this Standard 3

2 REFERENCES 4

3 DEFINITIONS/ABBREVIATIONS/ACRONYMS/SYMBOLS 4

4 PROCEDURE DESCRIPTION 6

4.1 Application 6

4.2 Format 6

4.3 Process Steps 7

4.4 Duration Of SLP 8

4.4.1 New Programs 8

4.4.2 Other Cases 8

4.5 SLP For Sub-Tier Components 8

4.6 Special Requirements For Rework / Repair / Salvage Operations 8

4.7 LRM (NAFTA-only) 8

4.8 Additional (Optional) SLP Activities 9

4.8.1 Extended Part Retention 9

4.8.2 Photographic documentation 9

4.8.3 Teardown Inspections 10

4.8.4 Continuing Conformance Validation (CCV) Testing (NAFTA-Only) 10

4.8.5 Partial LIFO Logistics Strategy for Extended Supply Chains 10

5 FLOW-CHART OF THE PROCEDURE 11

6 DESCRIPTION OF ACTIVITIES (HOW) 11

6.1 PPAP ACTIVITIES 11

on November 20, 2013 3:27 PM (UTC+1) - user: T8037AC
 anna.pedrial@fcaagroup.com

1 GENERAL

1.1 Purpose

The purpose of the SLP is to:

- Protection of the FCA plant and end customer from quality spills and issues during critical phases of a program (i.e., pilot builds and launch);
- Ensure that potential quality spills, which could arise and affect the FCA plant, are identified, contained, and corrected in the Supplier's manufacturing plant before shipment.

The term "Customer" or "FCA", as used in this process, refers to FCA US LLC, FCA Italy S.p.A., Maserati S.p.A., FIASA, and all subsidiaries and Joint Ventures which manufacture Chrysler, Dodge, Ram, Jeep®, FIAT, Alfa Romeo, Lancia, and Maserati brand vehicles. The word "Supplier" is intended to indicate both external and internal Tier 1 Suppliers. The term "sub-tier suppliers" refers to all Tier 2 and lower organizations, both internal and external. "FCA AQP Team" denotes FCA Employee involvement only, while "AQP Team" indicates all individuals involved in the process (i.e., FCA and Suppliers). The term "NAFTA" refers to FCA US LLC and FCA Mexico S.A. de C.V. personnel and facilities in the United States, Canada, and Mexico. "EMEA" refers to FCA Italy S.p.A. personnel and facilities in Europe, the Middle East, and Africa. "LATAM" refers to FCA Fiat Chrysler Automóveis Brasil Ltda. personnel and facilities in South and Central America. "APAC" refers to FCA personnel and facilities in the Asia and the Pacific region. Suppliers providing parts to these regions shall ensure they meet any region-specific requirements or processes called out in this document.

The term "SQE", as used in this document, refers to the FCA Supplier Quality Engineer.

The term "shall", as used in this document, indicates mandatory requirements. The word "should" indicates a suggestion or recommendation.

The terms "components" or "parts" as used in this document, refer to all Tier 1 supplied parts, assemblies, modules, and materials. "Sub-components" refers to items or processes supplied by sub-tier suppliers.

1.2 Coverage of this Standard

This standard applies to parts that meet any of the following criteria:

- New, modified, carryover, and MOPAR parts for new programs (including "Top Hat" and "Face-lift" programs);
- Undergoing a post-launch engineering change;
- Undergoing a process ("Forever Requirements") change;
- Undergoing a Resource;
- Supplied from a process re-started after a duration of 90 days or more;
- Other situations as mandated by the SQE (e.g., undergoing corrective action verification after a quality spill, on TPSL or NBH, etc.).

NOTE: FCA may request SLP be initiated at any time, as required. SLP does not take the place of 3CPR (3rd Party Containment and Problem Resolution) / CSL (Controlled Shipping Level), but may be added as an additional level of control over those processes, if desired.

2 REFERENCES

Table 1 - References

Document Number	Shield/Designator (if applicable)	Document Title	downloadable for suppliers from beStandard
CS.00071	N/A	Global Classification of Characteristics	Yes
FGP.16	N/A	Certified Shipping Level	Yes
9.01105	N/A	Product Identification Label (EMEA)	Yes
SQ.00001	N/A	Additional Quality Requirements (AQR)	Yes
SQ.00007	N/A	Master Process Failure Mode & Effects Analysis (MPFMEA)	Yes
SQ.00010	N/A	Advance Quality Planning (AQP) and Production Part Approval Process (PPAP)	Yes
SQ.00012	N/A	Forever Requirements	Yes
SQ.00013	N/A	SQ Escalation for Supplier Improvement	No
SQ.00014	N/A	Top Problem Supplier Location (TPSL)	No
SQ.00015	N/A	Supplier Quality New Business Hold (NBH)	No
SQN-A0489	N/A	Third Party Containment and Problem Resolution (3CPR)	Yes
SQN-A0490	N/A	Launch Risk Mitigation (LRM)	Yes

NOTE:

- AIAG publications are available at: www.aiag.org
- The 3CPR website is available [here](http://www.eSupplierConnect.com). External users must access via www.eSupplierConnect.com.

3 DEFINITIONS/ABBREVIATIONS/ACRONYMS/SYMBOLS

3CPR	3rd Party Containment and Problem Resolution: NAFTA process for containment of Supplier-responsible quality issues.
AIAG	Automotive Industry Action Group: a group founded in 1982 by representatives from Chrysler, Ford, and General Motors. The purpose of the AIAG is "to provide an open forum where members cooperate in developing and promoting solutions that enhance the prosperity of the automotive industry. AIAG's focus is to continuously improve business processes and practices involving trading partners throughout the Supply Chain." The AIAG website is at http://www.aiag.org .
APAC	Asia and Pacific: Business region including Asia and the Pacific (China, India, Japan, Korea, etc.) Managed by FCA China in Shanghai, China with support from Chennai, India; Pune, India; and Seoul, South Korea.
AQP	Advance Quality Planning: FCA core process for product and manufacturing process development.
AQR	Additional Quality Requirements: document(s) attached in the Source Package defining requirements over and above the PPA tool for specific material groups or processes.
BICEEP	Body/Exterior, Interior, Chassis, Electrical, Engine Systems, Powertrain
CSL	Certified Shipping Level: EMEA/LATAM process for containment of Supplier-responsible quality issues.
EMEA	Europe, Middle East, and Africa: Business region encompassing Europe, the Middle East, and Africa. Managed by FCA Italy S.p.A. based in Turin, Italy.

FCA	Fiat Chrysler Automobiles
GD&T	Geometric Dimensioning & Tolerancing: system of symbols used to define part and part feature shape, size, position, tolerances, etc.
Incident	An individual occurrence of a condition or event that is perceived as a non-conformance, there may not be enough information yet to define as an issue.
Issue	An incident or group of incidents that is a confirmed non-conformance that will affect customer perception or overall vehicle performance.
LATAM	Latin America: Business region encompassing South America and Central America. Managed by Fiat Chrysler Automóveis Brasil Ltda. in Betim, Brazil.
LPA	Layered Process Audit: method of verifying process controls and instructions are being followed. Reference the AIAG <i>CQI-8 Layered Process Audits</i> .
LRM	Launch Risk Mitigation: NAFTA process of “proactive 3CPR” initiated by FCA to offer an additional level of protection against issues / incidents during launch.
MPFMEA	Master Process Failure Mode & Effects Analysis: document(s) attached in the Source Package defining lessons learned from previous issues and the corrective actions performed.
NAFTA	North American Free Trade Agreement: Business region encompassing those countries governed by the NAFTA agreement – Canada, Mexico, and the United States. Managed by FCA US LLC in Auburn Hills, MI, USA and FCA Mexico S.A. de C.V. in Santa Fe, Mexico City, MEX
NBH	New Business Hold: Process to restrict a Supplier identified with critical quality issues from quoting new business during the Sourcing Process.
PA	Process Audit: activity during AQP for final approval of the Supplier’s manufacturing process.
Part I/S	Part Inspection Standard: NAFTA Engineering Source Package document defining FCA US LLC’s requirements for controls on special and critical characteristics.
PPAP	Production Part Approval Process: process for ensuring parts meet all requirements. See the AIAG <i>Production Part Approval Process (PPAP), 4^o Edition</i> and the FCA US LLC <i>Customer Specific Requirements for PPAP 4^o Edition</i>
SLP	Safe Launch Plan: process to protect FCA facilities from quality issues during launch phases.
SQE	Supplier Quality Engineer
SQM	Supplier Quality Manager
Tier 1 Supplier	Supplier who is responsible for providing components, services, or raw material directly to the Customer. All references to “Supplier” in this manual refer to a Tier 1 Supplier, unless otherwise specified. Note that in the case of some modules, the Supplier of a module component may be treated as a Tier 1 Supplier, even though they do not ship directly to the Customer.
Tier N Supplier (sub-Tier Supplier)	Supplier who is responsible for providing components, services, or raw material to another supplier in the Supply Chain. A Tier 2 supplies a Tier 1, a Tier 3 supplies a Tier 2, and so on. All references to “sub-tier” or “sub-tier supplier” in this manual refer to a Tier 2 (or lower) supplier, unless otherwise specified.
TPSL	Top Problem Supplier Location: a process used to improve the quality of the products manufactured by FCA’s external suppliers with poor IMQ

and/or Warranty performance.

4 PROCEDURE DESCRIPTION

4.1 Application

The SLP consists of controls, inspections, etc. that are over and above the standard production controls in the Supplier’s Control Plan. It shall include, at a minimum, all of the following characteristic types: Regulatory (including Safety, Emissions, Homologation, and Report), Functional, Important, and Regional “Special” characteristics (including key <D>, Stoplight, Q_H, Q₊, Q_C, PQC-X, and CPC-X).

FCA may, at its discretion, add other characteristics as well.

4.2 Format

The SLP shall be included as part of the Supplier’s pre-launch and production Control Plans. It consists of two types of controls:

- “Reinforced” or more stringent versions of existing controls;
- “Supplementary” or additional controls that will be done during the SLP time period only

If the Reinforced controls will be done in-station, they shall be included on the Control Plan in a row below the existing control. For example:

Part/ Process Number	Process Name/ Operation Description	Machine, Device, Jig, Tools, for Mfg.	Characteristics				Methods					Reaction Plan
			No.	Product	Process	Special Char. Class	Product/Process Specification/ Tolerance	Evaluation/ Measurement Technique	Size	Freq.	Control Method	
10	Molding / Injection mold the rear bumper	Gage 1234		Warpage		Qi	+/- 1mm	Gage or Fixture	1 pc	2 hrs	Std XYZ	Notify Line Supervisor; implement containment
10 (SLP)	Molding / Injection mold the rear bumper	Gage 1234		Warpage		Qi	+/- 1mm	Gage or Fixture	5 pcs	1 hr	Std XYZ	Notify Line Supervisor; implement containment

Figure 1 - Format for Reinforced Controls

Other Reinforced controls, and Supplementary controls, shall be included on the Control Plan at the end of the document. For example:

Part/ Process Number	Process Name/ Operation Description	Machine, Device, Jig, Tools, for Mfg.	Characteristics				Methods					Reaction Plan
			No.	Product	Process	Special Char. Class	Product/Process Specification/ Tolerance	Evaluation/ Measurement Technique	Size	Freq.	Control Method	
120 (SLP)	SLP Inspection / Bumper Supplementary Inspection	CMM		Hole Position		Qd	+/- 0.2mm	CMM	1 pc	2 hrs	Std. ZZT	Notify Qlty Manager; implement containment and shut down mold

Figure 2 - Format for Supplementary Controls

The Supplier shall identify SLP Reinforced and Supplementary controls by using the “SLP” designation after the Part / Process Number. (A separate color text may also be used, but is not mandatory.)

If agreed to by FCA, the Supplier may include the SLP Reinforced and Supplementary controls on a separate Control Plan document, with its own unique reference number. In these cases, each control must clearly reference back to the appropriate row on the production Control Plan or be clearly identified as a Supplementary control. In addition, the primary Control Plan must have the following sentence included: "This document does not include the FCA Safe-Launch Plan (SLP)" with the SLP document number then referenced.

4.3 Process Steps

The SLP is developed during the Process Planning Review (PPR) meetings and shall include all Regulatory, Functional, Important, and Special characteristics (at a minimum). FCA may include additional characteristics, at their discretion. Inputs to the SLP should include:

- Additional Quality Requirements (AQR)
- Master PFMEA
- Part Inspection Standard (NAFTA)
- Lists of defined critical characteristics
- Drawing / GD&T
- Design and Process FMEAs

For parts shipped during the VP/Gamma and Pre-Series/ Pre-Pilot build phases, parts shall be checked 100%. For later builds and production, characteristics shall be checked at a sample size and frequency defined on the SLP rows of the Control Plan, based upon production rates and as agreed to by the FCA AQP Team. The SLP shall be reviewed and approved by the FCA Team prior to implementation for VP/Gamma.

The Supplier shall identify the following, as a part of the development of the SLP:

- A single individual from the Supplier's plant management responsible for updating, maintaining, and ensuring implementation of the SLP;
- Defined offline SLP inspection stations for Reinforced controls not performed on the production line and for Supplemental controls, which shall include (as applicable):
 - Adequate lighting (at least equivalent to FCA's Customer Product Audit (CPA));
 - Approved boundary samples;
 - Inspection instructions;
 - Appropriate reaction plans for any identified defect or nonconformance;
- Implementation of SLP activities through the Supply Chain (Tier 2 and lower). The duration of SLP at sub-tier suppliers shall be such that all sub-components supplied to the Tier 1 during the Tier 1 Supplier's SLP shall be covered under the sub-tier suppliers' SLP;
- For EMEA/LATAM: A packaging and labeling process check, including requirements for MOPAR parts;
- Additional verification of error and mistake proofing (in addition to that performed during the Layered Process Audit (LPA));
- Documentation and analysis of SLP results. This includes:
 - Format and analysis of the results, which should match the requirements for the type of characteristics being checked (variable data, SPC, etc. as appropriate);
 - Reaction plans for out-of-control characteristics;
 - Retention of the data per FCA requirements;
- Identification of SLP parts. This includes:
 - NAFTA / LATAM: SLP parts shall be identified and cross-referenced with the applicable results. Identification marks should be legible, on non-visible & nonfunctional surfaces, and not easily removed. The FCA SQE and Engineer shall approve the method of identification prior to

implementation. In addition, the Supplier shall comply with any specific FCA plant requirements or requests.

- EMEA: The Supplier shall apply on each Product Identification Label (standard 9.01105) a round green sticker of at least 25 mm dia., with the signature of the person responsible for the development and implementation of the SLP. Rework / repair parts shall be identified as such. The Supplier shall comply with any additional FCA plant requirements or requests.

4.4 Duration Of SLP

4.4.1 New Programs

At a minimum, SLP shall begin with the first shipment of parts for the VP / Gamma build phase, and end no earlier than the date of Full Production + 90 days.

4.4.2 Other Cases

For all other cases (including post-launch engineering changes impacting the part and process [OdMs / CNs], approved FRs, Resourcing, SLP implemented for TP SL/NBH, etc.), SLP shall begin with the first shipment of parts and end no earlier than 90 days later.

When a defect or nonconformance is found during the SLP (either at the Supplier or FCA plant), after appropriate corrective actions are implemented, the SLP shall continue for an additional 90 days (at a minimum). If the defect was detected at the FCA plant, FCA shall implement, at its discretion, 3CPR / CSL (level 2/3) activities.

NOTE: Nonconformances detected on the product/process during the SLP shall be used to update the PFMEA, production Control Plan, Master PFMEA, and other quality documents, as applicable.

4.5 SLP For Sub-Tier Components

The Tier 1 Supplier is responsible to ensure that a Safe Launch plan is in place for all sub-tier supplier components. SLP at sub-tier supplier locations shall include all special characteristics (both those identified by FCA and internally by the Tier 1) and all "pass-through" characteristics. SLP at sub-tier suppliers shall follow all the requirements listed here within, at a minimum.

4.6 Special Requirements For Rework / Repair / Salvage Operations

During the Safe-Launch period, rework is not allowed unless agreed to (in writing) by the FCA SQE and Engineer. Otherwise, nonconforming parts shall be scrapped. Rework operations shall meet all requirements in the PPAP for rework parts, including a completed PFMEA and controls on the line that meet or exceed those on the regular production line. The FCA SQE shall review rework operations as part of the Process Audit.

Shipments of parts with reworked components during the SLP period require written notification to receiving plant, including FCA Production Control, receiving Plant Supplier Quality, and SQE prior to shipment. Reworked parts must be traceable as rework and identified in accordance with the receiving plant's instructions.

4.7 LRM (NAFTA-only)

The AQP team and/or Product Development SQ (PDSQ) may initiate LRM activities as appropriate, with need evaluated at each build phase.

4.8 Additional (Optional) SLP Activities

Each of the following SLP activities are optional but may be required at the discretion of the FCA SQE, over and above the standard SLP process.

4.8.1 Extended Part Retention

The Supplier shall retain part build samples for problem solving during the pre-production phases (VP/PS/gamma/pre-pilot/pilot) and first 90 days of production. When feasible, part samples should be scrapped at the end of the retention period.

If part samples will not be scrapped but re-introduced into production (requiring FCA SQE approval), the Supplier shall:

- Ensure that obsolete engineering levels are not re-introduced into the supply chain unless approved by an IAA.
- Identify the method and criteria for acceptance of the parts, with approval by the FCA SQE and Engineer;
- Identify re-introduced material when shipped to the FCA or FCA-designated plant.
- Add an additional 100% visual inspection of the material. This should be an ongoing, continuous activity, throughout the production run.

Each part retention plan shall include:

- frequency
- retention period
- retention duration
- retained part disposition plan.

Terminology used:

Frequency: Indicates how often samples are to be randomly selected from production. For example, a daily frequency means that 1 part per day is to be retained.

Retention period: Hold the retained parts for this period of time. For example, in the case of a 6 months retention period, a part produced on January 1st is retained until June 30th.

Retention duration: The retention duration is the length of time in which samples are to be collected. For example, if the retention duration is daily frequency for 90 days post launch, the supplier is required to collect daily samples, every day for 90 days.

The specific part retention plan shall be reviewed and approved by the FCA SQE.

4.8.2 Photographic documentation

The Supplier shall collect photographic evidence or parts, at a frequency agreed to by the FCA SQE. Automated or manual cameras shall be used to photograph outgoing finished goods to record the state / condition as shipped. Photos are considered quality records and shall be retained by the Supplier.

Photos are used for root cause analysis for external characteristics: Presence of external parts, correct routing of hoses, tubes, wiring, appearance, basic confirmation of connections, etc. Camera locations and zoom settings shall be optimized based on product failure mode RPN.

4.8.3 Teardown Inspections

The Supplier shall perform a disassembly (teardown) inspection of final assemblies on an on-going basis.

The Supplier shall teardown and inspect completed assemblies for the following, plus any other characteristics determined by the FCA AQP team:

- Missing components
- Residual torque
- Scratches, visible contamination, or other non-conformances.

The teardown inspection shall be added to control plan, with the frequency approved by the FCA AQP Team. In addition, the Supplier shall:

- Record inspection results
- Use random selection for parts
- Teardown inspection shall be performed by qualified / trained personnel.
- Only re-use components resulting from teardown inspection if they go through the approved rework process. Note that some components may not be re-used such as gaskets, seals, stretched fasteners, etc.

4.8.4 Continuing Conformance Validation (CCV) Testing (NAFTA-Only)

The Supplier shall conduct Post launch CCV testing. This is an abbreviated functional test based upon tests from the DVP&R designed to detect manufacturing defects.

General CCV test requirements:

- No more than 5-day (maximum) duration
- CCV may be discontinued after 90 days based on exit criteria (zero failures). When required by the FCA PPA Team, the CCV testing may continue for the life of the part.
- Specific validation test requirements shall be determined by the FCA Design Release Engineer (DRE)
- CCV testing shall be added to the DVP&R, Part Inspection Standard, and Control Plan (as applicable)
- CCV testing shall be performed again when a new production operating pattern is implemented (additional shifts, etc.).
- Parts used in CCV testing shall be scrapped unless otherwise agreed to by the FCA Design Release Engineer.

4.8.5 Partial LIFO Logistics Strategy for Extended Supply Chains

For extended supply chain scenarios, the Supplier shall implement a minimum 10% LIFO (last-in-first-out) delivery logistic process. This is to accelerate identification of defects. A minimum of batch or lot traceability is required when implementing this step.


Example: When supplier is shipping from an offshore to an onshore warehouse location. Supplier shall perform a minimum 10% LIFO for duration of the program.

5 FLOW-CHART OF THE PROCEDURE

N/A

6 DESCRIPTION OF ACTIVITIES (HOW)

6.1 PPAP Activities

<i>Direct Responsibilities:</i>	SQE				
<i>Support Functions:</i>	FCA Engineering, Supplier				
<i>Input:</i>	Control Plan with SLP				
<i>Description of Activities:</i>					
<p>During the Process Audit, the FCA Team shall review the Supplier's SLP and associated inspection stations. This includes:</p> <ul style="list-style-type: none"> - Review of data and analyses from previous part shipments (such as VP part shipments); - Review and approval of offline SLP stations; - Verification of part and packaging identification; - Review of Supplier reaction plans; - Review and approval of corrective actions on any defects or nonconformances discovered to-date - The Supplier shall make any revisions or updates to the SLP as necessary. <p>Suppliers are required to complete the SLP activity for all parts. If an SQE (or other FCA personnel) finds this is not the case, a Forever Requirement Violation can be issued to the Supplier. FCA personnel can request SLP data at any time.</p>					
<i>Output:</i>	Verification of SLP				
<i>Reference Documentations:</i>	PPAP Tool				
<i>Records</i>	<i>Document</i>	<i>Filed by</i>	<i>Catalogued by</i>	<i>Period</i>	 
	SQ.00010	SQE	SQE	See SQ.00010	See SQ.00010