Quality Systems Basics Plus

1) **The QSB+ is a questionnaire used to provide objective evidence that satisfies both General Motor's and PSA's Supplier Quality Expectations.**

2) **Supplier is required to read through QSB+ presentation before filling Audit form in, to understand QSB+ expectation. If needed Supplier can contact approved 3rd party providers for QSB+ training or workshop.**

3) **Suppliers are required to keep completed copies of the QSB+, and accompanying corrective action plans, covering the prior 12 months.**

4) **Supplier is required to forward an updated self- assessment with associated action plan every 12 months after initial certification or 60 days after any key management change (Plant manager, Quality Manager or Operation Manager) or repeat Quality issue.**
   If self-assessment is missed to submit, certification can be revoked.

5) **Self-assessment audits can not and will not be certified without verification by customer SQD or customer representative.**

6) **Overall scoring of 85% or greater without any Red key elements will be certified.**

7) **QSB+ certification is valid for a 3 year period.**
   It is important to note that this certification can be revoked at any time during this period if it has been determined that a supplier's quality performance has deteriorated.
   QSB+ elements can be checked by PSA or GM during post certification visits, compliance audit or PCPA.

8) **A List of Approved 3rd party providers is available.**

9) **Any questions about audit or audit procedure should be addressed to responsible GM SQE or PSA SD Site.**

10) **The results of the audit in no way absolve the supplier of its responsibility in relation with its commitments toward local regulation and its customers requirements.**

GM Specific Clauses

1) **Quality expectations are addressed in the Global Supplier Quality Manual (GM 1927).**

3) **Latest audit shall be uploaded into GQTS Supplier Cert Tab.**

5) **GM SQD can input a forecast date by sending self assessment to SQ Cert mailbox with Self Assessment in subject line.**

6) **High number of customer claims DUNS location will be required to put customer claims reduction activities in place - certification will only occur after 60 day review period of customer claims, reduction activities (see question FRE) min 15% improvement.**

7) **The certification status will be made available for viewing in the 'Certification' module in GQTS.**

8) **A List of GM Approved 3rd party providers is available in Supply Power:**
   SupplyPower / Document Library tab / Supplier Quality folder / 3rd Party Provider Management folder

9) **QSB+ presentation and toolbox is available in SupplyPower.**
   Presentation:SupplyPower / Document Library tab / Supplier Quality folder / GM1927 Global Manual folder / GM1927-36
   QSB+ toolbox: SupplyPower / Document Library tab / Supplier Quality folder / QSB+ toolbox folder

PSA Specific Clauses

1) **Quality expectations are addressed in the document Manuel de la Relation Fournisseur (MRF).**

3) **Latest audit shall be forwarded to PSA SD Site responsible for the plant.**

9) **QSB+ presentation and toolbox are accessible through the link:**
   https://docinfogroupe.psa-peugeot-citroen.com/ead/doc/ref.01601_13_00408/v.dp/pj
   (PSA portal access identification required)

QSB+ - Quality Systems Basics +

Supplier Name	ADHEX TECH TAPES, S.L	**Scope of Audit**	QSB+ : Quality System Basics Plus
Supplier Location	PORRIÑO	**Audit Date**	29/05/2015
Supplier DUNS / COFOR	0	**Auditor Name**	0
Audit Conductor	○ **Supplier Self-Assessment**	○ **Verification of Supplier Self-Assessment**	○ **Certification Audit**

	Key Elements		Self Assessment Scoring				Original QSB+				Customer Audit Scoring				Comment
			Potential	Total	%	Status	Potential	Total	%	Status	Potential	Total	%	Status	
1	Fast Response	FR	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
2	Control of Non-conforming Product	CNC	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
3	Verification Station & Error Proof Verfication	VS&EP	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
4	Standardized work	SW	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
5	Training	TR	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
6	Layered Process Audit	LPA	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
7	Risk Reduction	RR	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
8	Contamination Control	CC	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
9	Supply Chain Management	SCM	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
10	Managing Change	MC	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
11	Maintenance	MAI	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
12	Manufacturing & Material Flow Mngt	MMFM	0	0	NR	NR	0	0	NR	NR	0	0	NR	NR	
13	External Logistic	ELG	20	18	90%	G	0	0	NR	NR	0	0	NR	NR	
	Audit Summary Total Score		**20**	**18**	**90%**	**G**	**0**	**0**	**NR**	**NR**	**0**	**0**	**NR**	**NR**	If any of Requirement is scored by 0 or 1 Key Element goes to Red Green - 85% or greater with No Red Key Elements Yellow - 75-84% with No Red Key Elements Red - < 74% or a Red Key Element
	Audit Result		**Pass**				**Fail**				**Fail**				Green - Pass Yellow - Conditional Pass - Follow up needed Red - Fail - Workshop/training needed
	General Comment														

BIF Code:

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
Fast Response							
FR1	Daily leadership meeting held with cross-functional, multilevel attendees to address significant external and internal concerns.	**1) There is a daily Fast Response (FR) meeting with cross-functional attendees and led by manufacturing.** 2) The FR meeting is a communication meeting and timing is respected. **3) All the significant external and internal issues are addressed.** **4) Natural owners are assigned to problems, next report out date is assigned.** 5) Meeting takes into account the production forecast and the quantity produced. 6) Safety and near miss accident issues are reported out.	Attend on FR meeting. Observe: - led by manufacturing with cross -functional attendees, - how leader controls the FR meeting (keep timing max 10-20 minutes, focus on subject, not going to the details...), - environment is suitable (everyone can hear and see the meeting), - how issues reported out, - problem solving report format is used for report out and document the status of the issue.		**NA**		
FR2	Fast Response Board tracks all major concerns with appropriate timing and exit criteria.	**1) Fast Response board is used for tracking of issues, being updated before FR meeting (board could be a dry erase board, laminated poster, Excel sheet projected by beamer etc.).** **2) Method of communicating problems to all Key Stake holders is defined (e.g. Quality Alert, Temporary Work Instructions, By-Pass Procedure etc.).** **3) Exit criteria represent the core 6 Steps of problem solving (1. Define 2. Contain 3. Root cause 4. Correct 5. Validate 6. Institutionalize) including timing for each of the exit criteria.** **4) All the exit criteria are statused (Red, Yellow, Green), red items have a planned date to go green with next steps. Problems are not closed until all criteria is met. Overall status represents the worst condition or overall planned timing has been exceeded.**	- Prior to the audit check the last customer complaints focusing to the open ones. - Prior to the FR meeting ask if there are any significant internal issues. - Check the board if it contains above described external and internal issues. - Follow an issue from FR Tracking Board through the exit criteria confirming actions are in place & all the relevant documents have been updated. - Check few statuses if they are rated well based on their timing, judge few N/A items whether they do not need to close the issue.	Board should be improved. Visual comunication method Exit criteria TBD	**NA**		
FR3	System is in place to ensure fast response to operator's concerns and information flow between shifts.	1) System in place to support respond to the concerns of the operator. **2) Escalation process is defined in order to ensure that problems are quickly communicated to people who can help.** **3) All information which can affect the next shifts have to be passed across and documented.** 4) Manufacturing leadership reviews shift book daily to verify proper containment or corrective action done, decides further escalation to FR meeting.	- Ask operators how they can escalate their issues. - Andon system or similar in place, if applicable. - Test andon's function and response to request (light boards, lamps, or audio signals work, support arrives soon). - Participate at shift change, check shift book and information shared.	2 - Escalation process non visible in FR.	**NA**		
FR4	A defined process for Problem Solving including a standard for documenting the tools used for root cause identification.	**1) Standard process (PPSR, 8D or equivalent) used with a format that follows the core "6 Steps" of problem solving (1.Define, 2.Contain, 3.Root Cause, 4.Correct, 5.Validate, 6.Institutionalize).** **2) Analysis process is developed and applied for all the customer returned parts.** **3) Problem Solving forms used across the plant for internal, customer and supplier issues.** **4) Evidence of cross-functional team approach for solving problems.** **5) Tools for identifying root cause are applied (7 diamonds, 3X5 why to correct systemic issues, Fishbone Diagram etc.).**	- Prior to the audit check last customer complaints focusing to the issues where root cause found and corrective action implemented. - Verify that problem solving used efficiently, all the core "6 steps" applied, specially that real main root cause found and action implemented against the root cause. - If no customer complaint issued verify via an internal or sub-supplier issue. - Check a Drill Deep (5 whys), main systematic root causes found.	1 - No evidence of standard process during FR meeting, a board must be installed on the FR area following the 6 steps of problem solving. 3 - Problem solving form must include check of the efectivity, and updates (if necesary) of the control plan, flow diagram, work instructions, quality alert,PFMEA, LL.... Also update procedura IC02-P607 reaction plan with the escalating criteria and when problem solving must be developed (linked to FR3-2). Recomendation: include quality, security and prductivity metrics in the FR board.	**NA**		
FR5	A system to capture and institutionalize lessons learned.	**1) Electronic form or database is used to document Lessons Learned.** **2) Method which assures implementation supported by evidence of review dates, distribution lists, or posted Lessons Learned as well as reviewed by Leadership.** **3) Institutionalization (Read Across) is applied for all the issues where problem solving is done.** **4) Completed Lessons Learned information which is easily retrievable by all who need the information. (e.g. Master FMEA, APQP Program check list reviews).** 5) A process to collect suggestions of personnel is put in place and contribute to Lessons Learned and process improvement.	- Ask people for examples how they are using Lessons Learned system. - Check 6th step of problem solving (Institutionalize) via examples of point FR4. Check Drill Wide Matrix or 7&8th step of 8D of last customer complaints.	A LL data-base must be implemented.	**NA**		
FRE	Targets are defined and followed to ensure effectiveness of fast reaction for external and internal issues.	1) Tracking of safety related metrics (e.g.: accident without lost working days, distinguishing lost time accident & no lost time accident etc.). Lead time to solve safety issues. **2) Quality Q or other method to track FR performance is posted and up to date.** 3) Tracking of total amount of significant internal and customer complaints based on their trend and statuses (not responded, open, or in delay and closed in time) and average closing timing. **4) Tracking of all issues that reoccurred after corrective action has been implemented.** 5) Continuous improvement data for line stoppage/downtime from Andon. **6) Location with a high level of customer complaints (>24 complaints in last 12 months) shall have a special team created to work on complaints reductions - performance shall be tracked at FR meeting on open issues list.**	- Prior to audit check number of last 12 month PRRs. If higher than 24 (do not count line accumulation ones) or trend is significantly negative, special PRR reduction team has to be established. - Check last customer complaints whether due dates kept. If not reasons for delay, actions need to be addressed. - Check red items percentage, evaluate actions addressed to eliminate roadblocks. - Evidence of periodical review of average closing time for each exit criteria and set action plan for any deviation.		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**
Control of Nonconforming Product							

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
CNC1	Traceability rules are applied according to the class of traceability of the finished product and FIFO is kept.	**1) Development of processes which integrate traceability requirement (including tier parts) agreed with customer and applied at each stage of the manufacturing process.** **2) Quality status of the product (physical or data-processing) are identified in entire process.** **3) Equipment and stock areas are designed to facilitate FIFO and allow to identify easily the non-compliance with FIFO .** **4) When FIFO cannot be strictly respected (derivative flows), rules are defined to minimize the disturbances (e.g.: stock rotation).** 5) "Quantitative" approach is taken into account to determine theoretical suspected batch size. Dilution calculation are carried out and rules/procedures are defined to comply threshold of Dilution.	- Check parts in process and suspected material that last operation performed is identified. - When traceability is required check it via a part. If you have unitary traceability on a parameter or a component: choose a finished product and ask for the component / process "value" associated with the product. - Assure that LPA check sheet is assuring-traceability application. - Overall shopfloor organization allows to respect the FIFO (layout, main material flow). - Dilution Calculation: check how many finished products must be verified if an incoming part, a process parameter or a rework process failed.		**NA**		
CNC2	Nonconforming (NOK) and suspect material are identified and segregated in order to prevent them from unintended use.	**1) Consistent tagging & visual management (foot print , labels etc.) procedure is defined and kept in entire organization to ensure that identification and handling of NOK or suspected material is in place to avoid mixing with normal parts.** **2) If sample checks (e.g.:, hourly sample product audit) find NOK part, it is ensured that all the parts produced from last known good parts are handled as suspected.** **3) If red tags are used for both scrap and suspect material, tag must have disposition.** **4) NOK parts are segregated, recorded and their storage is managed including Quarantine area which has authorized access and quantities in quarantine are controlled.** 5) Decision rules and responsibilities are defined, escalation process is established. 6) Risk of mixture NOK parts with conforming parts is analysed and action addressed.	- Check in shop floor that identification tagging system is used in all areas (check at incoming, working stations, control stations, rework) and visual management (e.g.: foot print, colour coding, labels etc.) is applied. - Scrap data are documented and verified. - Ask operators that every one in shop floor is understanding colour coding used inside the organization. - Scrap boxes size should match with part size. - Verify quarantine, access is defined, quantity is controlled Verify that avoidance of mixing NOK part ensure via layout of workplace, handling and storing of NC parts.	4- Evidence of suspicious parts produced before of a NOK control.	**NA**		
CNC3	Alert is issued for significant issues to ensure communication and action for stakeholders.	**1) Alert process is defined on the basis of the severity level of non-conformity and applied for both external and internal issues once problem occurred at least as per FR issues.** **2) Alert includes minimum problem definition, the standard and deviation from standard, tasks, time line.** **3) Escalation process is put in place with internal/external distribution and notification (Contact list for customer and tier suppliers exits).** 4) The standard defines the criteria of withdrawal of posting.	- Review FR board and check open issues whether quality alert posted. - Check that Alert is clear, understood by team and posted in stations needed. - Customer and tier supplier contact list are available.	1- Alerts limints and escalation process not availlable (linked to FR3-FR4)	**NA**		
CNC4	Containment is segregated and standardized, all the potential quantity and location of suspected material are identified.	**1) Containment worksheet or equivalent contains all the potential locations and quantities including physical quantities and status (OK/NOK).** **2) Containment area is separated from production line, standardized work is applied.** **3) Containment process systematically includes securing of stock and pipeline in order to guarantee breakpoint.** 4) Containment actions are defined for each customer issues and verified in order to prevent further defects, breakpoint are documented and communicated to all involved parties. 5) Exit criteria are defined to stop countermeasures.	- Check that Containment Worksheet is used before initiating any containment. - Verify Containment Worksheet contains all the potential locations. - Check that countermeasures are put in place for each Alerts. - Ask team member about containment and its rules. - Ask one team member perform who containment in any FR issue, how he did the containment and how he filled the Containment Worksheet.	No Contaiment sheet availlable.	**NA**		
CNC5	Rework or repair is standardized, performed only with necessary authorization and process of reintroducing parts back to line .	**1) Prohibited or authorized rework operation clearly defined. Authorized rework operations have to be part of part/process approval. Parts waiting for rework have to be handled as suspected parts.** **2) Failure modes of rework are considered in PFMEA, identified in Process Flow with its reintroduction at or prior of removal point.** **3) Reintroduction of reworked part includes all downstream checks and colour coding in order to ensure that all control plan inspections & tests to be performed.** **4) If a not approved rework operation is needed, the authorization and release process are defined (including customer if required).** 5) Re-use of components is considered as a rework operation. The component re-used must be traced on the finished product. 6) Each reworked part is traceable via an identifier, documented serial number etc.	- Rework is part of Process Flow. - Potential failure modes of rework are detailed in PFMEA. - Check rework station, standardized work is applied. - Check if team members understand rework identification process and follow one reworked part, how it is handled, identified and reintroduced back to line.		**NA**		
CNC6	Parts which have deviations, but approved by customer are managed; traceability of concerned products are guaranteed.	**1) All the parts which have deviations are handled as suspect parts.** **2) Deviation is approved according to customer requirement, deviations are granted for a limited period or a defined quantity of parts.** **3) Traceability of the parts delivered under deviation is guaranteed. Manufacturing batches are identified.** 4) Impact of deviation on process and product is analysed and based on its result all the responsible parties have to be included to communication and decision about usability of deviated parts.	- Site history of requests for deviations. - Procedures and forms used on site. - Check PPAP WS for GM. - Check 'Request to deliver non-conform product' for PSA and initial samples are available for deviations. - Multi-disciplinary approach for the decision for initiate deviation request. - Evidence of traceability.		**NA**		
CNCE	Targets are defined and followed to reduce scrap and increase First Time Quality at all levels of operation.	1) Dilution calculation: affected batch size vs. containment worksheet in case of internal or customer complaint. **2) Performance metrics such as scrap rate (internal ppm), rework percentage, FTQ, VOC, etc. are established and followed at all levels of the operation.** **3) Tracking of customer complaints caused by CNC issues (e.g.: rework, B/P violation, known NOK parts shipped, etc.).** 4) Costs of poor quality (including indirect costs: sorts,...). 5) Tracking of number of containment at customer and in-house. 6) Tracking time in containment (e.g.: long lasting CS).	- Prior to audit check Controlled Shipping and customer complaints link to control of nonconforming product. - Verify that containment driven back to the source of error. - Verification of countermeasure action.		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
Verification Station & Error Proof Verification							
VS1	A system in place focuses on Building Quality in Station through prevention, detection and containment of abnormalities.	**1) Verification Station strategy is defined on procedure/instruction level which contains selection of VS place, temporary/permanent VS, guideline for alarm limit and definition of escalation process.** **2) Characteristics checked 100% are defined and Verification Station is developed according to Standardized Work requirements.** **3) Customer complaints have to be always covered in verification station.** **4) All the temporary and permanent verification stations which are required by customer are implemented.** 5) Exit criteria is defined to remove non permanent Verification Station and approved by Quality. 6) Impact of VS on capacity of the line is verified.	- Ask for set up a Verification Station for a theoretical problem and check that conditions are defined to establish VS in short time. - Check a verification station, is clearly identified, developed acc. to standardized work: instruction developed, layout defined to avoid bypass and mixing of parts, training and necessary certification done. - GP12 is implemented in Launch phase. - C.A.R.E is implemented for GM Powertrain suppliers. - For PSA suppliers final inspection implemented as Verification Station. - If needed, VS capacity confirmation via "limited" R@R.	VS at the end of the line must be reviewed again. Procedure /instruction not checked.	**NA**		
VS2	Alarm and immediate reaction system defined; escalation process and records established for defects entering in the Verification Station.	**1) Alarm limits are set based on type and number of defect found. Escalation procedure is defined and followed when alarm limit is reached.** **2) Results of controls are recorded (records the number of each type of problem by the hour) and posted at or near to Verification Station. A real-time follow up of results is applied.** **3) Immediate reaction is applied and recorded (issues, immediate fix, corrective action taken and breakpoint). Upstream reaction process is defined.** 4) The decision criteria to stop production is established and written on the escalation procedure.	- Tally Sheet posted at or near the Verification Station, filled in properly. - Ask VS operator about escalation. When and who to call, who responded and when. - Check results back, proper escalation was done when alarm limit reached. - Alarm limits are reasonable: e.g.: 1 for customer complaint, GP12, Controlled Shipping.		**NA**		
VS3	Problem solving process is applied and corrective actions implemented as result of Verification Station Activities; Leadership reviews Verification Station activities and results.	**1) Problem solving activities is conducted based on Verification Station Pareto analysis.** **2) Group leader reviews in a daily basis (daily management walk through or meetings) Verification Station activities and results and follow up the action plan.** **3) Leadership/support staff reviews in a weekly basis the status of problem solving activities.** 4) In case of lack of detection of non-conformance part, verification station controls have to be re-evaluated and improved.	- Check problem solving was applied, corrective actions were defined against main root cause (not re-training of operators). - Verification station is owned by management.		**NA**		
EP1	The Error Proofing devices are identified, managed and regularly verified.	**1) A master list of error-proofing devices is available including description of verification (self or with master samples).** **2) Each error-proofing device/system and its master samples are clearly identified and managed.** **3) Error-proofing devices are verified regularly with master sample at least once per day, but at all part number change and start-up (including after significant production stop).** **4) Verification documented with sign off.** **5) When it is applicable, Gage R&R are been conducted to confirm EP efficiency.**	- Participate at an Error Proofing verification, check process kept and documented well. - Identification of EP devices on shop floor & coherence with the list. - Records of verification (control plan, start-up work instructions). - Check identification, conservation, easy access, calibration of master samples. - Work Instructions for verification. - Is Gage R&R result less than 10%?		**NA**		
EP2	In the event of Error Proofing devices malfunction, the suspect products are managed. Reaction to failures, corrective actions and re-verification are documented.	**1) All the EP failures have to be documented and reaction plan includes who is notified and actions to be taken.** **2) All the parts produced since the last OK verification have to be handle as suspected material and apply containment.** **3) Corrective actions to fix Error Proofing device failure is documented.** **4) In the event of error proofing devices malfunctioning or unavailability, production is stopped until capable substitution processes/control are identified and handled as by-pass process.**	- Ask people who make EP verification about his/her responsibility in case of EP failure and escalation process. - Check back records that containment were done for all the EP failures. - Error Proofing malfunction is escalated to shift book, FR meeting etc.		**NA**		
VSE& EPE	Targets are defined and followed to evaluate Verification Station & EP effectiveness.	**1) Performance Graphic, Q chart or report card (i.e. calendar days-red/green, I-chart etc.) showing feedback from downstream processes.** **2) FTQ or internal scrap metrics showing improvement trend, reduction of events/defects over time.** **3) Verification station applied flexible, alarm limits are reviewed continuously.** **4) Tracking of error proofing failures.**	- Prior to audit check customer complaints caused by failed error proofing or no detection on verification station. - Any long lasting CS, GP12 or temporally verification station. Actions to close them. - Review charts, verify action brought expected result. - Check how often the alarm limit reach: no alarm=no improvement. - Check that verification station(s) selected efficiently: 1. review data: customer complaints (any major or repetitive issue), CS, GP12, FTQ results, high RPN items from PFMEA, process capability data. 2. Based on data reviewed, evaluate if Verification Station(s) implemented to right place or there is a need to implement a new one(s). - Verify that Error Proofing verification frequencies are reasonable.		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**
Standardized Work							

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
SW1	The workplace environments are safe and ergonomic.	**1) Relevant safety standard are applied for each workplace.** **2) Design of general and workstation layout considers safety aspects to avoid potential safety risks.** **3) Rules related to ergonomics of workstations are defined and applied for each workstation design. They take into account the environmental conditions.** 4) Operators are involved in workstation design (ergonomic workstream) and major player in the qualification process which always includes safety and ergonomic aspects.	- Check on shop floor potential safety issues e.g.: hidden corners, potential accidents, pedestrian way, colour coding on floor, noise, temperature etc. - On the shop floor, appreciate the level of light, the temperature (cold/hot), the level of noise, the loads carried by operators, the level of work (hands up...). - Look for result of ergonomics evaluation. - Look at a "painful" workstation. Verify its action plan for the improvement.		**NA**		
SW2	The workplaces are clean and orderly arranged in order to contribute to higher quality and optimization.	1) A standard which defines layout which includes internal stock and necessary buffers **2) Organization of workplaces are suitable to ensure compliance with the FIFO including repackaging operations.** **3) Systematic approach for all the workplaces organization (like 5S) is implemented and maintained.** **4) Visualization is used in the shop floor.** 5) A continuous improvement and optimization / waste elimination process is in place related to workplace organization.	- Check workplace organization and visualization at several different places (incoming/storage area, work stations, maintenance room). - 5S audit records and verify actions implemented for findings. - Layout is in coherence with the workstation. - Method for waste elimination is applied (VSM, 7 Waste etc.) and periodical review minutes are available.		**NA**		
SW3	Working instructions are standardized and available for each workstation.	**1) Standardized Work Instruction (SWI) are available for each operation.** **2) SWI covers the whole of the produced references** and line balancing means levelling of the workload across all workstations. **3) Revision history is traced back for process/product changes.** **4) SWI are developed by cross-functional team and includes at minimum:** **- Work elements including quality controls and their sequence,** - Operator movement with sketch of work flow, **- Takt time and overall cycle time,** - Standard in-process stock, **- Required PPE and safety requirement if applicable,** **- Support description with pictures, sketches and images,** **- Reference to product/process/control standards.** **5) For each work element, instruction describes:** **- Major Steps (What),** **- Key Points (How)** - Reason (Why) **and critical key points requires 'Why'.** **6) SWI is posted near or at the operation.**	- Work instructions at different workplaces (manufacturing, quality control, material handling/logistic), check: 1. Easy availability, 2. Compare instructions to work performed by operators. Observe 3 full cycles of the job in station & verify that the Major Steps, Key Points are followed Reason is understood, 3. Controls listed in Control Plan is added to SWI, efficient time allocated for quality checks. - Try to perform an manual operation based on SWI, check all necessary information, hint, key points... described to perform operation. - Ask few operators to explain SWI. Does operator understand it? - Various balances are managed for different planned production outputs and product mix (e.g.: modification of line speed).	3 - N/A 4 - Cycle time not availlable.	**NA**		
SW4	The operations to validate the start of production are described and applied.	**1) Start-up instructions are available (can be covered in SWI or checklist) for manufacturing operation and tool change/set up.** **2) A Start up process is applied at** beginning of shift, **part number change, after significant production stop (planned or unplanned) and documented.** **3) Start up instruction includes a list of the checking tasks to be carried out and recorded:** **- availability and functionality of all the manufacturing and control equipment, error proofing and PPE,** **- process/product parameters with tolerance limits,** **- availability of components and materials,** **- environmental conditions at the workstation (cleanliness, lighting, etc.).** 4) All activities/operations to be carried out prior to tool installation are defined (e.g.: pre-heating of tool). **5) Start up instruction defines first-off parts validation. Traceability to be ensured till validation completed, result is documented.**	- Take few start-up instructions for automatic equipment and verify content. - Ask a set-up person about roles of set up. - Evidence of traceability between parts produced & 1st off part. - Check back records for start up activities and verify: - exact date of start-up documented, - set-up parameters recorded and within tolerance, - first-off parts result, - in case of any deviation action initiated and result verified.	1 - Include information that the print check list P02-03C must be done every start of butch, after a significative stop (supplier must fix how much time) after plant clousures,…	**NA**		
SW5	Reference parts and boundary samples (called samples) are available and managed in order to confirm inspections.	**1) Responsibilities for definition of samples are established (including customer if required). At boundary samples tolerances for each characteristic and decision criteria are clearly established.** **2) Samples (some cases they can be replaced by photos) are clearly identified and in accordance with latest design and approval status.** **3) Usage of samples are described/referred in instructions, used in training process.** **4) Samples are periodically reviewed and its result is documented based on acceptance criteria and customer feedback/complaint.**	- Verify that boundary samples are available for operators - Check that samples represent typical failures - If samples are physical parts, they should be painted/coloured - Ask operator when they using samples. - Verify sample storage condition. - Evidence that samples used for training. - They have easy access in area where they are used, storage preserves original condition.	For the moment no boundary samples availlable.	**NA**		
SW6	The capability of the control devices is checked prior to using them in production process and it is periodically verified.	**1) All the gages are periodically calibrated and recorded according to procedures, ensured that only calibrated gages are in use.** **2) If calibration performed in-house, necessary skilled staff, equipment and facility are available, if outsourced external laboratory accreditation is verified.** 3) The capability of the measurement systems/equipment (Gage R&R) is periodically reviewed according to procedures. **4) The acceptance criteria are defined for calibration and capability.** **5) For each deviation/non-conformity or equipment exceeding calibration due date, containment and corrective actions are defined and validated and followed by Quality Manager (apply handling of non-conformance).** 6) Standardized Work is applied for gage instructions.	- Check several gages in different area (production, lab, incoming, storage) for: 1. identification, 2. calibration status and their record, 3. proper usage and storage (ask operators about usage and handling of gages, are aware about risks of damaged gage). - List of gages contains identification and calibration period. - Check schedule for calibration. - Verify a work instruction for a gage (see the acceptance criteria). - Gage R&R are been conducted to calibrate operators from shift to shift / line to line.	NA no gauges availlable.	**NA**		

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
SWE	Target defined and followed to optimize processes.	**1) Tracking of external and internal issues created by not well defined working instruction.** **2) Layered Audit result related to non compliance of Standardized Work.** 3) Direct labour efficiency (ratio of real number of parts produced against the theoretical number to be produced during the opening time). 4) Cycle times levelling. 5) Capability & calibration follow up indicators (e.g.: number of late calibration). **6) Tracking of downtime and/or scrap rate caused by set up.** 7) Ergonomics evaluation rate.	- Prior to audit check customer complaints where root cause is linked to Standardized Work (working instruction not detailed, wrong set up etc.).		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**
Training							
TR1	Training process is defined. Organization, methods, skills and facilities are available for training activity.	**1) The training process covers the entire staff of manufacturing, logistics and the support functions including temporary employees.** **2) Internal trainers are identified and qualified to ensure that only certified trainers train.** **3) A graduating step approach is developed and applied for each training activity, such as the 4 Step (Job Instruction Training) process: 1.Prepare, 2.Demonstrate, 3.Try-out performance, 4.Follow-Up.** 4) Dedicated infrastructure (outside of the process) for hands-on training simulating production conditions, if possible.	- Verify at different workplaces whether their operators got the training from certified trainer. - Record of Internal Qualified Trainers. - Ask operators how they were trained (e.g.: according to 4 Step). - Rules for Graduation Process is described at Training Procedure.		**NA**		
TR2	Training needs for safety are identified and trainings performed for all the relevant people.	**1) A safety policy is defined and communicated to all staff. A Safety handbook is established and regularly updated in coherence with the policy.** 2) An organization is defined according with policy and local legislation with suitable equipment and qualified people. 3) Training needs for safety are defined based on the risk assessment linked to the industrial domain and specific work station. **4) Based on safety training needs all the relevant staff are trained in two levels: 1.basic training about general safety rules, 2. individual job training, if applicable.** 5) Visitors safety is managed; standards & equipment are available (quick training, suitable safety devices are at disposal).	- Safety manual & policy. - New employee training covers safety requirements. - Ask operators, who works on station where safety requirement established, about awareness of safety rules. - Organization chart: responsibility for the safety is defined. - Facilities on site: infirmary,… - Safety standards are kept e.g.: PPE, circulation on the shop floor, risk related to process (stamping, melting etc.). - Signs, posters on the shop floor, line marking, behaviour of logistic employees.		**NA**		
TR3	Basic and individual job training needs are identified, their content are formalized and all the trainings are recorded.	**1) Basic training is given to each new employee which minimum includes:** **- New hire orientation,** **- Knowledge & respect of the product (including management of key characteristics),** - Perform proper record keeping (production/quality), - Understand work place organization responsibility, **- Quality requirements (containment, red-bins, Andon, etc.),** **- Escalation procedure (are the right people notified during a problem).** **2) Individual job training is documented for each employee showing training needs, skill or knowledge level of the job, who trained them, timing of operator sign off.** **3) Individual job training is held in case of change in training content or need (e.g.: Working Instruction change). Traceability for latest change is ensured.** 4) Documentation, scheduling and tracking forms for employee refresher training if they have not performed that job within a specific duration. **5) All the training activities are documented, records are available and easily retrieved.**	- Check if the Individual Job Training has all training content need to perform the task. - Check Individual Job Training records for different job elements (operator at a working station, quality controller, team leader, a support function) - Ask to team member to explain the documentation regarding quality, workplace organization, escalation process. - Verify few operators whether following Standardized Work Instructions & know the quality and productivity requirements. - Check few working stations and verify that training records are available to the latest working instruction level. - Verify if there's employee that go back to the operation after specific period out of operation without refresh training.	1- Escalation procedure must be included on the new emplyee training. 2- Not included the contents of the work station training. 3- No evidence of re-training when a work instruction is updated.	**NA**		
TR4	Operator qualification process for each job position and workplace is applied, including re-qualification if needed to ensure that only qualified people performs the job.	**1) Qualification levels are established. For each one of them, measurable criteria are defined.** 2) A calibration process is in place for all the people making check operations where results depend on subjective decision. **3) Flexibility Chart or equivalent posted at all operations or work area which:** **- contains numbers of qualified people per each workstation as well as workstation per person are targeted; associated action plans are implemented,** **- indicates the steps in training & skill qualification level achieved for each job,** **- has been updated.** **4) Criteria to revise qualification level are defined; they take into account the operational results at the specific workstation, the result of the layered audit, time off job etc.** 5) If re-qualification failed, actions are implemented to reach required qualification level again including re-assessment or degrade qualification level.	- Chart showing cross training/certification level in a cell or work area such as a flexibility chart. - Look for a job rotation plan or log. How often does team rotate? - The number of Team Members certified per station should support the Job Rotation Plan. - Check if the training procedure describe the Re-Qualification process - Check if a Re-Qualification Process (Employee Performance Review) is in place. Evaluate if an action plan was generated in case of Low Performance. - Check several operations where result depends on subjective decision. Check the record of calibration process, frequency, results and action plan	3- No targets on the flexibility chart. 5- Criteria for re-training not apply (illness, customer Q claims, time without working in that workstation).	**NA**		
TR5	A process of motivation (individual recognition /reward) is implemented. The policy is defined and managed.	**1) Process in place to recognize employees achievements.** 2) Individual objectives are in line with the site targets and are regularly reviewed, evaluated with feed back to the employees. Individual interviews are systematic for the whole of staff. 3) Process in place to collect and address employee suggestions with short and medium term improvement actions established.	- Check how the leadership is promoting the recognition (e.g.: 7 Recognition Success Factors). - What kind of system does the supplier use to receive feedback from the employees? - Check if the actions plan regarding employee grievances are "on track". - Ask team leaders how they can recognize their team member achievements.		**NA**		

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
TRE	Metrics are defined and followed to ensure effectiveness of training process.	**1) Flexibility target (number of qualifications per employees & number of employees qualified per workstation).** **2) Layered audit results related to people awareness of procedures (e.g.: standardized work, safety requirements, material handling, workplace organization etc.).** 3) Number of re-training needed in same subject (failure of first training). 4) Training assessment by trainee. **5) Internal and external issues due to the lack of training.** 6) Employees satisfaction survey.	- During audit check how team members follow general procedures (e.g.: handling of non-conforming material), as a confirmation about training effectiveness. - Check all the findings found during audit which can be linked to lack of training. (root cause of deviation is lack of knowledge). It affects to effectiveness of training. - Does supplier measure the turnover in their departments (fluctuation)? If there is high turnover, special action addressed?		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**
Layered Process Audit							
LPA1	A generic Layered Process Audit (LPA) is established.	**1) Written Procedure: defining the rules of LPA.** **2) Layered Audit Check Sheet: developed and applied for all manufacturing areas (including material handling). LPA Check Sheet shall define what to "Look For".** **3) LPA Check Sheet comprise the following elements at minimum:** **Workstation Specific** **- safety/ergonomic items: proper safety practices and PPE are being followed,** **- std work: it's being strictly followed,** **- workplace organization: standards are maintained, proper tools, gages and materials are available & used, quality checks, FIFO, material handling, standard in stock process are in place and being followed.** **Quality Focused** **- specific controls: related to KPCs, customer issues, low capability process, special process are in place and being followed.** **Manufacturing System Specific** **- performance metrics: they are established and managed,** **- error proofing verification: out of control situations are identified and managed,** **- QSB+ Key Elements Effectiveness: effectiveness is being checked.** **4) Training of auditors: using a standard method for LPA (choose the workstation, conduct the audit, give feedback, document results and conduct follow up).** 5) LPA is applied for standard processes of supporting functions and Internal Process specific audits are performed (i.e. Process/Commodity Specific Audit , CQI audits etc.).	- Verify if the LPA procedure define: - Frequency - who shall perform the LPA - how to conduct the LPA (standard method) - how to record and treat issues Examples of fields in the LPA check sheet form: Workstation - PPE: the team member is using all the posted PPE, - Work Instructions (for example: Standard Operation Sheet, Job Element Sheet), - Proper tools, gages and materials available and used. Quality Focused - Specific Controls are in place in order to protect the customer and they are effective, - Ensure control of significant process elements which can impact areas such as customer satisfaction, ppm, warranty, - Ensure control of high risk elements including: Operator/ Process Sensitive Operations, Key Process Control Operations/Checks, Mandatory Assembly Sequence Operations. Manufacturing System - Visual Management: conditions out of target were identified and there's an action plan, - Errors Proofing Verification activity is being performed, - Flexibility Chart is up to date. - Verify that auditor understood the questions, LPA check list filled in properly: follow a team/group leader in a LPA. Verify if they use the Standard Method.		**NA**		
LPA2	LPA which covers the whole operational activities is carried out and owned by manufacturing.	**1) Each workstation is audited and schedule frequency is defined to ensure:** **- covering all the shifts,** **- each operation audited minimum once per month,** **- containment activities (e.g.: sorting, Controlled Shipping, GP12 etc.) are covered by LPA.** **2) LPA Schedule for All Levels: showing participation of All Levels (from Team Leader to Top Management) with established frequency for all manufacturing areas.** **3) LPA schedule is tracked by manufacturing.**	- In the shop floor, select a workstation and verify how the workstation is audited by LPA: - frequency is according to the plan, - once a problem is identified, how the team member is informed, - check if safety issues are detected by LPA, - verify if "top level" is conducting the audit. - Check back LPA records, verify that audits were really performed according to schedule and all the operational activities were audited (not only manufacturing operations, but material handling, storage, shipping etc.). - Verify if containment/rework activities are included in the LPA Plan.		**NA**		
LPA3	A follow-up of the LPA and associated action plans are in place. Deviations are treated	**1) LPA records: All the LPA results are documented including** **- no deviation found (Y),** **- deviation found / not corrected during audit (N),** **- deviation corrected during audit (NC),** **- not applicable (NA).** **2) Problem solving is applied directly at the workstation to treat deviations, actions are defined and recorded with responsibility and target closing date.** **3) Countermeasure Sheet** **- Deviation found / not corrected during audit (non-conformances or operator claims as well as safety/ergonomic issue) must be addressed on Countermeasure Sheet.** **- Corrective action implementation is followed up.** **- Countermeasure Sheet is used for Continues Improvement too. (e.g.: if a best practice is discovered during the LPA it should be used as a driver to improve the current Standard Work).** 4) LPA results are used to Continuous Improvement.	- How organization apply the problem solving methodology for issues detected during the LPA and how the organization record the countermeasure (for example in the countermeasure sheet) and how they do the follow up of actions - actions defined against root cause (e.g.: not only re-training) - due dates kept - implemented actions were verified. - Check the involvement of the management (knowledge of the result, of the on-going action plan) Continuous Improvement - Flexibility Chart revised using the results of the LPA - Problem Solving Methodology revised using the results of LPA - Workstation Organization performed - LPA used to capture a more efficient way to work and lead the standard work revision		**NA**		

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
LPAE	LPA effectiveness are continuously monitored and analysed via LPA results in order to ensure keeping procedures.	**1) Tracking of audit results with visualization to share status on affected area (nb of non conformances per Department, pareto of non conformances,% of compliance).** **2) Tracking of audit schedule & action plan implementation (open issues versus closed issues).**	- Perform a Layered Audit together with team leader. Compare your results with team leader. In case of gap, identify reasons of different evaluation. - At shop floor, verify in the visual management board (area or plant): - LPA Plan - LPA Tracking - LPA Results - LPA Action Plan/Effectiveness		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**
Risk Reduction							
RR1	PFMEA's shall be developed and maintained by cross-functional teams for all manufacturing processes and support functions.	**1) PFMEA is developed by cross-functional team.** **2) PFMEA available for all part numbers and all operations.** **3) Scoring of Severity/Occurrence/Detection are according to customer's guideline, ratings are consistent.** **4) Content of PFMEA fields are defined properly in accordance with customer guideline.** 5) If supplier is design responsible, DFMEA has to be used to develop the PFMEA.	- Check member of PFMEA team and verify that necessary trainings are provided. - Evidences that PFMEA prepared for all the P/Ns and all operations even the base was a generic PFMEA. - Scoring is according to predefined standards: PSA: Q242110_EX_EN / GM: AIAG PFMEA Reference Manual - Verify content: Effects evaluated from both customer and manufacturing point of view, Potential cause of failure defined specifically, ambiguous phrases (e.g., operator error or machine malfunction, etc.) should not be used. Real preventive actions are listed.	1 - In the procedure the definition of the cross-funtioanl equipement must be included.	**NA**		
RR2	Proactive approach for reduction of PFMEA highest risk items are implemented.	**1) For high severity rankings or high risk items, FMEA team ensures that the risk is addressed through existing design controls or recommended actions.** **2) Prioritization based on defined approach (e.g.: combination of Severity, Occurrence and Detection or Risk Priority Number etc.).** **3) Recommended actions documented with responsibility and due date.** **4) Quality tools (e.g.: LPA, Verification Station etc.) are applied till recommended actions are implemented in order to keep risk under control.** **5) Recommended actions re-evaluated after their verification.**	- Review risk reduction action plan, evaluate that actions are defined against root cause or improve detection, target dates are kept. - Evaluate that Quality Tools implemented are efficient to keep risk under control. - Review scoring after recommended action implemented. - Where Severity 9 or 10, detection is low (visual inspection alone is not acceptable).	1 - No focus on the reduction of high severity items; procedure must be updated including target dates to review the PFMEA after a claim.	**NA**		
RR3	PFMEA is reviewed periodically as proactive and reactive activities.	**1) PFMEA is reviewed and updated for each past quality issue and corrective action that have been implemented within target completion date.** 2) After each issue, 5 whys analysis is performed to understand why PFMEA did not predict failure. Action implemented to avoid in future. **3) Periodic PFMEA reviews are scheduled based on process capability, process/product changes, etc… which cover:** **- all processes and their controls are included,** **- detection ratings are accurate,** **- occurrence ratings are analysed using data (SPC, FTQ, ppm, scrap data, Verification Station results etc.).**	- Revision date of PFMEA linked to past failures. - Check last customer complaint or quality issues and their update in PFMEA. - Review checklists, agendas or equivalent that assure adequate PFMEA review. - Check some operations/processes (material handling, labelling, rework/repair, etc…) are included and accurate. - Compare top internal scrap data with Occurrence scoring.		**NA**		
RR4	There is a Reverse PFMEA (pro-active approach) process in place to identify new potential failure modes in shop floor.	1) A Cross-functional team conducts on-station review . **2) A schedule of reverse PFMEA is implemented and regularly updated (timing for review with prioritization of operation and its status /planned-done/).** **3) All the findings are driven back into Process Flow, PFMEA, Control Plan, Work Instructions as applicable.**	- Check updates after reverse PFMEA performed. - Chose one station and perform a quick reverse PFMEA to confirm all current controls rated properly and all potential failure mode cover (try to create new ones). - Have the current Occurrence/Detection numbers been revised.		**NA**		
RR5	General assessment is conducted to identify potential risks which could impact to plant (normal processes/activities).	**1) There is a formalized process of evaluation and control of the risks concerning resources, facilities, tooling, shipping.** 2) The responsibilities of evaluation and management of risks are clearly established, coherent with the typology of the risks **3) A structured tool to identify, evaluate and prioritize risk based on a multidisciplinary approach is used (e.g.: FMEA approach).** **4) Prevention and reaction plans are established and deployed for each identified elementary risk.** When appropriate, plans are audited and simulations are carried out. 5) The risks and the associated plans are periodically reviewed based on the plant, corporate and external lessons learnt.	- Master securing plan which contains major risks, procedures and owners in case of e.g.: flood, fire etc. - Verify that master security plan covers the relevant major risks. - How risks are evaluate (which criteria, is there a tool like FMEA, etc.). - Who is responsible of the whole process, who is responsible for a precise risk. - An example of risk: fire. Look at the action plan (preventive: extinguisher, training / corrective: site evacuation plan, sprinkler, firemen on site, etc.).	PG08	**NA**		
RRE	Targets are defined and followed to ensure effectiveness continuous risk reduction activity.	**1) Tracking the number of high risk items (trend chart).** 2) Tracking of delayed recommended actions by leadership necessary actions done in case of delay. 3) Track that PFMEA reviews and reverse PFMEA are performed based on their schedule. **4) Number of new failure modes and root causes covered after complaint (both external and internal).**	- Top RPN chart or equivalent (based on prioritizing applied), e.g.:GM1927-21. - Review actions/implementation dates/delays. - Percentage of error proofing/error detection.		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**
Contamination Control							

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
CC1	Sediment is controlled with identification of possible risk areas for contamination as well as continuous measurement and monitoring of sediment level.	**1) Identify all areas/operations that could be affected by contamination and failure modes related to contamination are considered in PFMEA** 2) Procedure developed which includes method defining sediment collection and system to measure cleanliness. 3) Cleanliness results are documented and plotted on control chart. **4) Control limits are utilized to trigger reaction plans.**	- Verify if the organization had mapped all areas/operations that could be affected by contamination and identify the type of contamination in each area. Also, if these information were used during the PFMEA and Process Control Plan development. - Check if the cleanliness controls are being done according to frequency established at PCP. Frequencies are reasonable. - Check sediment measurement in lab (instruction and process). - Application using statistical method to monitor and control (include individual parts, sub-assemblies, full assemblies). - Verify if there is a documented reaction plan for cases where the limit control or unstable condition is reached. - Ask to team member and/or inspector what they should do when an out of control condition is reached.		**NA**		
CC2	Sediment reduction strategy is followed to ensure proper functionality of equipment and processes designed to remove/prevent sediment contamination.	**1) Procedure/instruction to define and maintain method and frequency of checks to ensure quality and cleanliness of:** - Metal Working Fluid System, - Fluid/Air Probes, - Work Station Cleanliness, - Dunnage and Part Storage, - Purchased parts, - Washer, - Debur.	- Check work stations cleanliness, daily verification to be established (Layered Audit, Tape test etc.). - Written procedure for inspection and maintenance of returnable dunnage. - Parts are covered / properly protected. - Parts on the assembly lines handled with lint free gloves / towels. - All wash/debur machine parameters captured and monitored/ documented. - Wash solution and process parameters monitored and analysed on an on-going basis.		**NA**		
CC3	If clean room / area is required (due to sediment or painting requirement), special rules are utilized in order to minimalize risk of contamination.	**1) Clean room protective clothing defined and enforced.** **2) Positive pressure to stop outside air/contaminants from being drawn into the clean room.** 3) Limited access by employee and enter/exit route to clean room are kept. 4) Sticky mats or shoes protection to remove contaminants from footwear. 5) Control of Chemicals detrimental to the process.	- Check if protective cloths are worn (e.g. hair nets, shoe covers, lint free lab coats, rags, gloves, etc.). - Check how access control to clean room is kept. - See if air quality and pressure are monitored. - Verify if filters are changed according to planning. - Check if controls of restrictions (e.g.: no fibrous material, no aerosol sprays, no food, etc.) are in place. - See if LPA is in place (if out of condition is identified there's a reaction plan in place).		**NA**		
CC4	Maintaining the processes to control and prevent dirt in paint/part and foreign material contamination.	**1) Sources of dirt and foreign material as potential failure mode is considered in PFMEA.** **2) Methods developed to prevent extra parts or materials that may fall into or stick to products and verified through error proof verification and/or Layered Process Audits (e.g.: sensor for masking used).** 3) Procedure or instruction describes dirt control and prevention for key areas: People, Process, Facility and Material. 4) Application of statistical method to monitor and control painting process such us dirt count (SPC, U-chart), dirt identification (Pareto) etc. 5) Ensure proper functionality of equipment and processes designed to remove/prevent dirt in paint or part. 6) Behaviour Instructions are defined and respected.	- Check if foreign material/extra part (screw, pin, washer, any small components, etc.) effect (like noise, function issue, etc.) are considered in the PFMEA. - Verify that dunnage, fixtures, conveyors, washers and pre-assemblies are protected to prevent falling material. - Check possibility to assemble part without masking. - Verify if all stations in the Paint area are clean up and operators do a self inspection of the area. - Ask to team member to explain what are the main sources of dirt - key issues in the people, process, facility and material area and how he works to avoid them. - See if the sources related to Process (paint spatter, overspray, towels, etc.) are checked by PM and there's a reaction plan established. - Check if general housekeeping process is established for facility and it is followed.		**NA**		
CCE	Targets are defined and followed to ensure continuous contamination reduction activity	**1) Sediment result monitored, reduction plan defined.** 2) Layered audit and Process Specific audits results. **3) Internal or Customer issues related with cleanliness.** 4) Pareto of defects for key sensible process (painting, metallization,...).	- Review sediment results and verify sediment reduction activities. - Evidence of site leadership reviews. - Audits performed focusing contamination control.		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**
Supply Chain Management							
SCM1	Procedures or work instructions to select and evaluate suppliers are implemented.	1) Procedures that require supplier audits to support sourcing decisions, evaluation of their systems. **2) Criteria to become sourceable supplier is defined.** 3) Contractual documents (such as SOR) contains all tier1 requirements, expectations, and processes, signed by tier supplier. 4) Supplier Quality Department or organization is fully involved in the sourcing process.	- If supplier selection is done at manufacturing location check documentation of a tier supplier selection process. - If selection is done centrally, check tier X status is known by manufacturing location. - Evidence of SQ responsibility (SQ organization chart or SQ training records). - Affect of manufacturing location to tier supplier's performance evaluation.	2- Criteria to become sourceable supplier must be included on the procedure.	**NA**		

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
SCM2	Customer specific requirements are cascaded to all tier supply chain and deliverables of the tier X are validated/approved by tier 1.	**1) Customer specific requirements are implemented at tier suppliers:** **- technical specification of product,** **- product and process specific standards,** **- procedures need to be applied (e.g.: PPAP/EI, PFMEA...),** **- traceability, FIFO and labelling requirements.** **2) Tiered suppliers comply to product and process validation requirements. Approval is available for all the components needed for assembled part.** **3) Final product Key and Pass Through characteristics are identified on component (or material) level as well as shared and controlled (if required with SPC) with tier supplier.** **4) All the design and process changes are communicated, Managing Change requirements are applied. Tier X supplier production transfer needs to be managed with specific procedures similar like BTAB.** 5) Tier suppliers capacity are confirmed for all the materials/components needed for assembled part.	- An example of Request For Quotation. Does it contain customer specific requirements? - Technical specifications forwarded to Tier X including list of critical characteristic (PCP). - Supplier quotation file including technical/process feasibility. - Check critical components product/process qualification files (PPAP). - Check customer drawing whether it contains any Key or Pass Through characteristics which are produced and controlled by tier X supplier. If yes, verify that tier X supplier drawing, PPAP/EI, Control Plan cover them as well as tier1 incoming control includes them. - Example of management on a tier X process change. - Check capacity confirmation for critical components.		**NA**		
SCM3	An escalation process is applied in case of tier supplier issues.	**1) For any delivery of parts with deviation, tier 1 validates the formal deviation request of the tier X complaint.** **2) For single issues, a systematic and disciplined approach to problem solving is implemented, an action plan is set up by the tier X and verified by the tier 1, due dates expected by customer are kept.** **3) Approved supplier list to track tier suppliers performance (e.g.: Bidlist six panel etc.). Performance indicators are defined with threshold.** 4) In the event of non-respect of a target, an actions plan to reach it is systematically defined and followed by the tier X supplier. 5) When a tier supplier moved from Green ranking, escalation process take into account the tier 1 support of the tier X supplier to improve. Exit criteria are defined. 6) Regular audits are performed at suppliers plants. In case of complaint to verify action implemented, and regular audits at key suppliers to improve their system (CQI audits, process specific audits, PCPA...).	- Prior to audit check whether there was any customer complaint caused by tier supplier. - Example of supplier complaints towards its tier 2, verify contents of the complaints - Is there a timely management with milestones? - Verify content of 5 whys prepared for customer complaint with problem resolution report (8D; 5P; Red-X etc.) - Example of action plans given by tier X. How is it validated and verified? - Example of supplier audit, evidence of audits at key suppliers - Escalation criteria (e.g.: Controlled Shipping, Top Focus, New Business Hold etc.) - Critical suppliers identified and tracked via such as Top Focus process, exit criteria defined. - Review Tier x Performance Matrix with Tier x corrective action plan approved by Tier 1.	1 - Problem solving must be applied to supplier issues (update procedure PO-05). 3 - On the procedure must add a reference that the performance criteria are register on PO-04-A2 sheet 1.	**NA**		
SCM4	An incoming inspection process is in place	**1) An incoming inspection Control Plan and the related control standards as well as sampling rules are established for each key/critical supplies' product.** **2) Only approved (PPAP/EI and incoming inspection released) components/material are used for assembled part.** 3) At the reception of supplied product the first controls take into account the checking of the quantity, of the integrity of the packaging and the identification of the product. **4) Part inspection requirement including Pass Through is established and implemented for each supply since design phase and updated in case of non-conformity.**	- Check identification of material released for production after receiving. - Verify that incoming covers Key and Pass Through Characteristics, frequencies are reasonable. - See a non-conformance found during incoming. - Verify link between incoming frequency and supplier performance (high ppm supplier). - Check incoming records for a component		**NA**		
SCME	Tier supplier targets are defined and their performance are tracked via indicators	**1)Tier X performance result (ppm, rate of complaints, lpB, delivery...).** 2) Average time to respond to complaints and close Problem Resolution. **3) PPAP curve (planned full PPAP date vs. achieved).** 4**) Metrics on Bidlist (number of red supplier, ...).** 5) Tracking results of the audit result at tier X.	- Check customer complaints, ratio of tier X supplier issues - Red suppliers on Bidlist, actions for improvement. - If any significant concern about Tier x Issues had been addressed in FR meeting.		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**
Managing Changes							
MC1	All product, process or source changes are monitored and controlled.	**1) A procedure to manage product/process /source changes are defined and applied- both planned and emergency changes.** **2) A change form is utilized to document all changes and controlled through a Document Control Process (e.g. tracking log sheet, revision numbering system, approval process, etc.).** 3) All changes are managed like a project; responsibilities and milestones are defined, planning, activities and the deliverables are established in agreement with the customer. 4**) All changes need to be reviewed and approved by customer (PPAP/EI). Customer is informed in early phase to get approval before kick off.**	- Check documentation via example: a design change and a process change: - organization (project team) & milestones, - evidence of customer approvals, - planning and evidence of reviews, - tool to ensure traceability of modifications. - Evolution of data system such as MRP system, storage management software, EDI server must be consider as major changes.		**NA**		
MC2	A risks analysis is applied for any product/process change.	**1) For any product/process/source change, a feasibility analysis is carried out. The study takes into account the impacts in terms of costs, technical, performance, quality, timing, capacity.** 2) Potential risks of change are considered via FMEA approach and document in DFMEA and PFMEA. 3) Based on risk analysis planning and implementation of the change are carried out, a product and process validation plan is defined. **4) Break point is defined when change become irreversible, it is communicated to customer.** 5) According to risk analysis, a securing approach is put in work in the launch phase (e.g.: mixing of old and new design).	Check one of last of modification and verify: - A feasibility analysis including lead time analysis, - Formalized impact evaluation & risk management, - PFMEA and DFMEA (if applicable), - Action in place to cover risk identified.		**NA**		

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MC3	A Production Trial Run (PTR) process is implemented.	**1) A standardized communication procedure and form to control and monitor all Production Trial Runs that documents each step of the process & records all approvals and results.** **2) Traceability of trial run batch is ensured.** 3) Quality reviews documented to release product for PTR shipment and verification process has returned to normal production.	- Example of a trial run. - Trial run validation criteria & results (records).		**NA**		
MC4	A parts banking strategy/procedure is implemented. It takes into account the constraint for long term storage of parts or materials.	**1) At planning phase, banking strategy takes account of process capacity, customer need, lead time of change and safety margin. If needed Customer approval for safety stock level.** 2) Stock level has to be managed in real time at phases of build up and implementation of change. In case of deviation customer should be alerted. **3) Established guidelines for execution of long term storage including protective packaging for parts and material.** 4) Quality reviews to established inspection criteria for the authorized release of banked parts and material prior to internal usage or shipment. **5) Except special agreements with customer, the supplier guarantees the complete exhaustion of the products to the old change level before delivering new change level, FIFO is kept.**	- Example of modification. - Banking planning and follow-up. - Evidence of reviews. - Follow up of stock level. - Long term storage specific measures including packaging. - Verify that FIFO is respected.	1 - By-pass proces "degradado" aplied and work instruction availlable. For other critical by-pass processes develope a contingency plan (linked to RR5).	**NA**		
MC5	By-pass processes are defined and managed. A procedure is in place to authorize by-passing processes.	**1) During planning phase potential by-pass processes have to be identified and minimum most critical ones to be considered as part of approved process.** 2) When alternative by-pass process is used, process should be temporally and return to normal process as soon as possible. **3) By-pass process approved by Operations, Engineering and Quality manager, Standardized Work and training applied.** 4) When alternative or by-pass process is used traceability has to be ensured. 5) Specific countermeasures (e.g.: verification station) and Layered Audit are in place when alternative or by-pass process are running.	- Is there a specific procedure? - Examine situation of bottleneck operations, equipment associated risk of capacity. - Example of by-pass process.		**NA**		
MCE	Indicators are defined and tracked to ensure that changes have no any negative impact to customer.	**1) Number of issues generated by a change.** 2) Tracking of PPAP due dates. 3) Unexpected cost of modification. 4) Change implemented by due date (milestone follow up). 5) No impact on service rate.	- Prior to audit check that any customer complaint issued due to: - unauthorized change, - by-pass process. - PPAP issues/delays due to changes. - total changes for per month - monitored and tracked.		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**
Maintenance							
MAI1	Maintenance organization and strategy are established and deployed.	**1) Maintenance process is formalized and covers all the machines, tools, devices, equipment and facilities on the site. It includes preventive and corrective maintenance.** **2) A system for managing, planning, organizing and monitoring maintenance operations is set.** 3) Resources are available during all production period and outside production period to ensure non critical maintenance operations (e.g.: preventive maintenance). 4) Suitable maintenance facilities and equipment are available. 5) Fast communication between production and maintenance is assured. **6) A process is in place to improve production output. It is based on analysis of operational availabilities, operators suggestions, 6sigma technics etc.** 7) Approach to standardize equipment (e.g.: using same filter, same interfaces to tools etc.).	- Preventive maintenance for safety equipment has to be performed on time without exception. - Check that a maintenance system in place to manage all maintenance activity, supported by IT tools like CMMS (Computer Maintenance Management System), Excel Sheets, etc. - Available resources by technology including outsourced experts (flexibility chart). - Implementation of resources near the manufacturing activities. - Are there free resources to manage the corrective maintenance? - Facilities available (areas well defined, conditions, 5S level, etc.) - Management improvement strategy and periodical reviews. - Review major brand types of major equipment - ask about process to purchase new machines. - A generic plan to improvement of a type of equipment (e.g.: electrical screw drivers).		**NA**		
MAI2	The activities of maintenance are planned, performed and tracked.	**1) The Preventive Maintenance planning takes into account risk classification of the equipment (safety, constrain and bottleneck equipment, unique process with no substitution process etc.).** **2) The planning is regularly followed, updated (including outsourced maintenance).** **3) Corrective maintenance is carried out for any deviation from the nominal (according to manufacturing priorities). The Preventive Maintenance activity is periodically reviewed on the basis of the corrective maintenance activities.** 4) Maintenance activities are considered as Standardized Work. Technical documentation is available and managed for all equipment. **5) Records of all maintenance activity and results are formalized and filled in.** 6) Necessary re-qualification is done after maintenance activity, its result recorded to ensure traceability. Start-up process applied (SW4).	- Choose machines (constraint/complex one) and a tool to verify: - maintenance planning: identification of the equipment, task to do, when, - follow up of the maintenance schedule and its visual management, - maintenance work instruction (including changes due to lesson learned), - technical documentation for a precise equipment including document management, - records of corrective maintenance activity (type of equipment, is there repetitive breakdown, etc.), - records of preventive maintenance on an equipment with a recent breakdown. - Verify that maintenance activities are fully deployed and covers all equipment (machines, facilities, tools) - Different type of preventive maintenance depending on the type of equipment (pure preventive approach & conditional maintenance).	Recomendation: TPM - No evidence of the TPM activity if the machine is not working. General maintenace musrt be improved.	**NA**		

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
MAI3	Level 1 maintenance is systematically applied and integrated to workstation instructions.	**1) Level 1 (L1) maintenance operations take into account equipment identification, cleaning, self-maintenance and safety devices verification.** **2) L1 maintenance is performed under manufacturing responsibility at operator's workstation. L1 operations are integrated in the workstation's work instructions.** **3) Any deviation, anomaly or improvement suggestion is recorded and, if necessary, escalated to a higher level maintenance activity.** 4) Records are analysed and used as lessons learned to improve maintenance operations.	- Ask operators about Level 1 maintenance responsibilities. - Verify few L1 maintenance working instruction and record. - Look at the equipment status on the shop floor (is there an identification (number), cleanliness, protection in good condition, leakage, etc.). - LPA records. - Evidences of activities transfer from preventive maintenance to L1.		**NA**		
MAI4	The spare parts and their storage are managed. The critical parts are identified.	**1) A list of critical spare parts is determined, managed and regularly updated.** **2) A spare parts stock is available with minimum stock level. Spare parts tracking system is combined with maintenance system in order to control physical inventory.** **3) The spare parts are stored in suitable conditions and periodic physical inspections are performed for long term stored items.**	- List of critical spare parts. - Stock of spare parts: reception / organization / consumption. - Conditions of storage. - Computer aided system. - Inventory (take an example of a critical part and verify the robustness of the inventory).	The spare list goes below thelimit. Procedure must include that is compulsary to update the quantities and to do the request of material whe the minimun stock will be reached.	**NA**		
MAI5	The customer's product specific tools are managed to preserve tool condition till end of their lifetime.	**1) Each Customer Specific Tool (CST), including customer owned one, is identified in a single and inalterable way according to customer requirements (customer marking). Identification includes tool change level.** 2) Lifetime of tools are strictly followed and documented in 'diary sheet' which includes lifetime of tool, shoot number, maintenance activities. 3) In case of sub-contracting, a list with the localization of the CST is established and communicated to the customer. **4) The storage of the CST is organized and managed. Activities to be carried out prior to storage are defined. Storage conditions guarantee the safeguarding of the CST until its end-of-life.** **5) Tool release process after storage is established. Start-up process applied (SW5).** **6) Product/process re-qualification is carried out for each replacement tool according to customer requirement.**	Check few tools to verify: - General conditions of the tools (leakage, rust, ...). - Identification and visual management of the tools. - A diary sheet and records, lifetime followed. - Communication & Customer approval for each change on a example. - Storage conditions. - Standardized maintenance operations.		**NA**		
MAIE	Indicators are defined and tracked to ensure effectiveness of all the maintenance activities.	**1) Performance & Reliability targets are defined on the basis of historical data and related indicators are tracked** - Failure Rate, MTBF, MTTR, stop of lines. **2) Tracking maintenance performed vs. planning (including service provider activity).** 3) **Paretos of breakdown.** 4) Average rotation of spare parts. 5) Deviations found during spare parts inventory audit. 6) Ratio of corrective maintenance against preventive maintenance.	- Customer complaints caused by machine or tool problem (e.g.: burrs issue…). - Verify quantity of few Spare Parts in stock.		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**
Manufacturing & Material Flow Management							
MMFM1	A structured process of manufacturing scheduling is implemented and systematically reviewed	1) Long term strategic scheduling is managed via a Sales and Operating Planning (S&OP) which includes a complete forecasting of customer demand. **2) The S&OP is reviewed regularly and is used to define manufacturing capacity, stock level & investment plans.** **3) A Master Production Schedule (MPS), coherent with the S&OP outputs, is managed on the site. It provides a complete forecasting of the customer demand at the Part Number level on short term.** **4) The MPS is reviewed regularly by logistics & manufacturing team (supported by maintenance) and is used to define resources needs (equipment time allocation, human resources, material etc.).** **5) S&OP and MPS are shared with production team and to tier X.**	- Check long (S&OP) and short (MPS) term scheduling for a product. Verify that: - capacity meets long term customer demand, - time allocated to other product is part of review, - S&OP regularly reviewed based on EDI data, - long term demand deployed into short term scheduling, - Master Production Schedule takes into account time allocation for maintenance. - check a tier X demand whether it is in line with tier1 manufacturing schedule.		**NA**		
MMFM2	The daily manufacturing activity is planned in detail and followed up at site level.	**1) A process is in place led by manufacturing to generate manufacturing detailed program on daily basis coherent with MPS outputs.** **2) The program takes into account the preparation time (batch change, tool change, set-up, start-up process, etc.) and up to date OEE rates.** **3) Deviations between forecast and real production are followed and controlled on daily basis at production line level. An escalation process is defined.** 4) A process to improve the setup time is in place. Organization should establish a goal, measure the setup time and define the action plan once the setup time goal is not reach.	- Check product chosen in MMFM1 section and check daily deployment: - Manufacturing detailed program, - Complete preparation time for a batch, - Different programs from a week to another (is it stable or not, level of flexibility). - The real production level vs. scheduling. - Planning & Minutes of optimization workshops. - Hourly Board Control for continuous monitoring of production - A strategy is in place to improve the setup time (e.g.: SMED strategy).		**NA**		

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
MMFM3	Constraint operation is identified and specifically managed.	**1) Based on customer demand all the bottleneck operations are identified.** **2) Constraint operation identified among bottlenecks and prioritized in regard to qualified operators, training, maintenance, scrap, setup and fast reaction in case of any deviation.** **3) Manufacturing detailed program is optimized taking into account constraint operation.** **4) Constraint shall be managed identifying problems, establishing action plans and verifying effectiveness of action plans in a regular basis.** 5) A back up plan for each bottleneck operations are defined.	- List of bottleneck equipment. - Check via record that: - constraint running continuously, - number of qualified people via Flexibility Chart - breakdowns and actions against them. - Check buffers size, ask operators how often they run out. - Constraint output is considered in production schedule (MPS).		**NA**		
MMFM4	Product packaging (final product, intermediate and supplies) availability and conditions are managed to ensure product quality.	**1) The loops and flows of full/empty packaging are organized and managed. Number of the available empty packaging is enough to keep the production running.** **2) A process to check quality of the packaging is applied; it takes into account the requirements of the customer and the standard definition of the packaging . All activities are considered as Standardized Work (SW).** 3) Packaging control work instructions are established and applied which include decision criteria for the use of packaging, the associated countermeasures and corrective actions (e.g.: alternative packaging, cleaning, maintaining, special transportation of empty packaging etc.). 4) Supplier responsibilities are clearly defined. Deviations are systematically communicated to the customer.	- Examine the flow of empty packaging. Try to see the loops are respected. - Verify the procedure to initiate the supply of additional packaging (threshold definition, alert process, timely response). - Check empty packaging storage area. - Verify a Work instructions for checking and cleaning. - What happens if there are no more Empty packaging? - Look at the conditions of the packaging particularly the label support. - Check actions for critical packaging from availability point of view (e.g.: alternative packaging is defined, for final product it is approved by customer).		**NA**		
MMFM5	Handling and storage conditions of product (final, intermediate and supplies) are respected in order to protect parts from damage and environmental effects.	**1) All storage areas are identified and organized by type of product (incoming, intermediate, Work In Process, final etc.). Process Flow charts are effectively matching with processes.** **2) Potential failure modes related to material storage and handling are considered in PFMEA (e.g.: damage by handling equipment, rust caused by storage condition, mixing up of products etc.).** **3) When needed, storage conditions are controlled by devices in real time (e.g.: temperature, humidity etc.). Records of stock condition are kept. Alert procedures and countermeasures are defined.** 4) Standardized Work (SW) is applied, structured approach for organization of storage are defined and applied. System in place allows to visualize easily storage operations and level of stock for each reference. **5) The stock management system take into account: product expiring dates, product change level and the respect of the FIFO.** **6) Stock level is checked via regular quality and quantity audits (E.g.: LPA).**	- Check storage area and condition at several places (incoming, Work in Process, final product). - Ask operators and material handling personnel whether they are aware of and following instructions. - Verify that adequate protection in place to protect parts from damage and mixing. - Condition of storage (temperature, waterproof, etc.) - Visual management in place (level mini & maxi are visible). - Check expiring dates by reading labels. - FIFO: risky situation to examine: intermediate stocks, double flows/lines (e.g.: 2 paint lines): how do they manage these type of situation (specific rules & procedures). - Specific management for the high runner references. - Results of audit or inventory. - Associated equipment is suitable for stocking and handling (barcode reader, informatics systems, forklift, racks etc.).		**NA**		
MMFM6	A system is in place which ensures that materials needed for production are organized and available at place of their application.	**1) Feeding plan is established and tracked. Suitable feeding equipment adapted to layout, flows configuration and available space.** **2) The feeding process is based on a structured methodology (e.g.: pull system) which:** **- minimizes overflows & non value-added operations (repacking),** **- guarantees the availability of materials at the workstation during all production period.** **3) All the feeding activities are considered as Standardized Work (SW) and guarantee the respect of FIFO.** **4) At the workstation, materials are used in manageable size and material flows are organized and managed following the standard work/in-stock process.** 5) Material flow optimization is in place based on the use of tools such as MIFA or VSM.	- Check if a standardize feed route plan is defined and followed - Check few workstations and check: - Respect of the "pull system" principles, - Alerts from the lines and their management: management of the risk of stock out?, - Work instructions (line feeding operations, loading, repackaging operations, etc.), - FIFO kept (organization of the rack). - Organization of "supermarket" areas (visual management) if existing. - Organization of the material flow at the workstation (entry & exit point for each components, packaging, useless movement). - Optimization activities (minutes of meetings, action plans, etc.).		**NA**		
MMFME	Indicators are defined and tracked to ensure effectiveness of material flow management.	**1) Indicators concerning availability of packaging.** **2) Stock management indicators:** **- Inventory,** **- Stock targets fulfilment.** **3) Lines feed indicators:** **- Feeding tracking / Internal service rate,** - Production losses due to feed missing, - Internal flows lead time. **4) Tracking of constrain output.**	- Prior to audit check any customer complaint issued related to packaging and material handling. - Layout of areas they are optimized. - Where applicable, the edges of lines are fed automatically or by little trains (no big boxes or full of components). - Stock level (min max visual mgmt.). - Workplace visual mgmt. of stock (min - max).		**NA**		
				Total Score:	***NR***	***NR***	***NR***
				Status	**NR**	**NR**	**NR**
External Logistic							

Item	Requirement	Criteria of Requirement	Look for	Comment	Supplier score	Original QSB+	Current audit score
ELG1	Supply process (incoming) is managed, organized & tracked.	**1) A process to follow deliveries is formalized and applied. Related operations are standardized. Resources are available and properly managed.** **2) A master schedule of deliveries is defined and follow up**. A visual management system, showing the smoothing of the deliveries (levelling), allow to follow them. An escalation process is implemented in case of deviation. 3) A logistic protocol is defined and regularly updated for each tier X supplier. Transportation organization toward the tier X suppliers is optimized. **4) The service rate of the tier X suppliers is followed; actions plans are established for most critical tier X.**	- Organization of the incoming (truck reception, unloading area, transfer to incoming stock). - Master schedule of deliveries (stability through weeks). - Working instructions. - An example of protocol with a tier X. - Service rate metrics. - An example of alert in case of deviation. - Resources available matches incoming and outbound deliveries.		**3**		
ELG2	A process to secure supplies (incoming) is applied on a basis of risks analysis.	**1) Components/materials which are risky to supply are identified and addressed to daily supply operations/logistic meeting. Countermeasures and Corrective plans are established and followed with Tier X.** **2) Medium/Long Term securing plans for Key Critical Suppliers/Parts are periodically reviewed by leadership.** 3) Safety Stock, advance warehouses are contractually defined and managed for the "far" tier X (more than 48h of transportation) and when applicable for the "risky" tier X. 4)The management of the site is strongly involved and validates the whole process.	- Identify a "risky" supply (ex: far supplier or failing supplier). - Examine the securing plan associated. - Emergency procedures with alternate supply process. - In case of safety stocks, check tier1 strategy defined for that (contractual definition, increased demand etc.)		**4**		
ELG3	Shipping process (outgoing) is organized and tracked. Packaging is properly labelled.	**1) Shipping process is described and timely managed. All the operations are standardized.** **2) Shipping process integrates milestone operations (e.g.: verification of availability of finished products, truck loading completed (AVIEXP/ASN)) allowing to alert customer in relevant time in case of any issue**. 3) Shipping planning is visually managed (Timing Table of the preparations of shipping orders). 4) A preparation list is available for operators. Operations done are recorded. Loading is prepared on "bogus truck" areas. **5) All the packaging are labelled properly and where is applicable label error proofing strategy is applied in order to prevent part from mislabelling. PFMEA covers potential failure mode of labelling.** 6) Specifically for synchronous (sequenced) deliveries, a constant monitoring/ follow up of the process is carried out in real time; all deviations/issues are recorded and analysed and start immediate countermeasures and corrective actions to eradicate issues.	- Shipping management board. - Verify that the shipping process includes at least the following milestone: - verification of finished products availability, - start of preparation, - end of preparation. Ready to ship, - truck loading completed (EDI message sent to customer). - Identification of deviations on the board (late supply…). - Organization of bogus truck areas. - Preparation lists. - Labels correctly fulfilled (with the right routing code). - Equipment and work instructions to check the product and pallet labelling. - Check hooping of the pallets (e.g.: safety aspect: metallic one can be danger for operators). - Verify that the AVIEXP/ASN message sent when truck loading is completed.		**4**		
ELG4	In order to guarantee that shipping process is carried out according customer needs, the Electronic Data Exchange (EDI) network is operational and a Logistic Protocol is managed.	**1) EDI communication is installed and is validated with the customer. Qualified people are permanently available on the site to manage EDI.** **2) Back-up solutions are defined, validated with the customer** and are periodically tested. **3) Any upgrade of EDI communications must be considered as significant change (See MC).** 4) A Logistic protocol is established together with the carrier (transporter) and the customer. It is continuously updated to take into account changes during current production (change of customer site, change of schedule, etc.). Resources responsible for the protocol management on site are identified. 5) Any deviation in the protocol application is treated and managed by action plan (alternative transportation mode, alternative packaging, etc.).	- Training records for EDI training. - Several Logistic Protocols and verify their status. - Coherence between different Logistic Protocols and shipping schedules. - Verify back-up solutions for EDI system failed. - Customer site contact list .		**3**		
ELGE	Indicators are defined and tracked to ensure effectiveness of external logistic management.	1) Indicators concerning the supply process: - Fill rate of the trucks, - Service rate of tier X Suppliers, - Tracking of Logistic issues with tier X Suppliers. 2) Indicators concerning the shipping process: - Shipping lead time, **- Customer service rate,** **- Tracking of customer Log issues,** - Pareto of failures (customer line stops / stock out), **- Rate of mislabelling.** 3) Indicators concerning the safety stock (applicable only if a safety stock has been contractually defined with customer) **- Stock level,** - **Rotation index of the safety stock.**	- Prior to audit check any customer complaint issued related to logistic problem, stock out - Visual management (indicators are followed on boards at the shop floor). - How supplier determines safety stock level - is risk analysis performed?		**4**		
				Total Score:	***90%***	***NR***	***NR***
				Status	**G**	**NR**	**NR**