

SKYJACK INC.

Supplier Quality Manual



Supplier Quality Manual

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1.0 INTRODUCTION

Skyjack is a world leader in the design and production of innovative mobile industrial equipment, notably its class leading aerial work platforms and telehandlers.

Skyjack proudly provides quality engineered, simple and reliable access and material handling equipment globally, so that companies can maximize utilization and their return on investment. All Skyjack's products are designed to be easy to service and maintain. By keeping design simple and using proven technology, the reliability and ease of service is common to all the company's products. Because of this, Skyjack machines offer the rental industry's best life cycle value through low cost of ownership, ease of service and maintenance, while retaining high residual values.

Skyjack Inc. is committed to quality, delivery and service to our customers. Maintaining a high level of customer confidence cannot be sustained without the full cooperation of our Suppliers. In this Skyjack Inc. is dedicated to establishing and maintaining mutually profitable relations with its Suppliers. The cornerstone to any relationship is unambiguous, concise and open communications.

In support of this relationship, Skyjack Inc. requires that Suppliers commit to the following objectives:

- Manage facilities, processes, quality systems and personnel to consistently and cost effectively produce products and provide services that meet the needs of Skyjack Inc. and its customers.
- Develop, implement and maintain Quality Planning tools (e.g. APQP, FMEA's and Process Control Plans) to assure that product and service requirements are met.
- Provide objective evidence, using recognized standards that confirm initial sample requirements have been met, and that acceptable process capabilities for all Special/Control Characteristics have been established and are maintained.
- Utilize appropriate statistical techniques for ongoing process control and improvement, reduction in part variation and waste through defect prevention.
- Actively engage in cost reduction / avoidance activities to the benefit of all stakeholders.
- Meet the expectations of society (i.e. – Workplace health and safety, the environment and energy conservation).

General

Skyjack is a wholly owned subsidiary of Linamar Corporation. Skyjack Inc. Supplier Quality System Requirements is a basis of the Quality Management System - Requirement ISO 9001. Skyjack Inc. prefers third party registration and certification to ISO 9001. This system is the framework for the fundamental quality system requirements for all Suppliers. The requirements are an integral and legally binding aspect of Skyjack Inc. Purchase Orders and Contracts. Although this does not alter or reduce any other requirements of the contract, it does provide a concise understanding of Skyjack Inc.'s quality requirements.

Any questions or concerns regarding these Quality tools should be directed towards Skyjack Supplier Quality

1.1. PURPOSE:

The purpose of this manual is to define Skyjack Inc.'s processes and requirements for Suppliers in a clear logical format. The manual is intended to communicate to all Suppliers, Skyjack Inc.'s requirements and expectations, in an effort to eliminate all ambiguities and enhance communication between Skyjack Inc. and the Supplier community. The common goal is to meet or exceed customer requirements for quality, cost and delivery.

1.2 APPLICABILITY / SCOPE

This manual applies to all Suppliers of direct material to Skyjack Inc., its companies and subsidiaries.

1.3 RESPONSIBILITY

Skyjack Inc. Supplier Quality is responsible for the content of this manual.

1.4 DEFINITIONS / ABBREVIATIONS

1.4.1 DEFINITIONS

Key Suppliers – Suppliers that are critical to the achievement of Skyjack Inc.'s objectives (new technology, long lead time, high volume, high cost).

1.4.2 ABBREVIATIONS

8D – Eight Disciplines model of problem solving approach
APQP - Advance Product Quality Planning
CC - Critical Characteristic
C of C - Certificate of Conformance
CMM – Coordinate Measuring Machine
DFMEA - Design Failure Mode Effects Analysis
EDI- Electronic Data Interchange
MSA – Measurement System Analysis
NCR - Non Conforming Report
NIST - National Institute of Standards and Technology
PFMEA - Process Failure Mode and Effects Analysis
PO - Purchase Order
PPAP - Production Part Approval Process
PSW – Part Submission Warrant
QMS - Quality Management System
RFQ - Request for Quote
RMA - Return Material Authorization
R&R - Repeatability and Reproducibility
RPN - Risk Priority Number
SC - Significant/Special Characteristic
SPC - Statistical Process Control
SPCR – Supplier Process Change Request

2.0 MANUAL

2.1 APPLICATION

2.1.1 This manual and its stated requirements are a part of the Supply Contract and Purchase Orders with all locations of Skyjack Inc. and affect all articles.

2.1.2 To cover all particular requirements for product and services, specific supplements to this standard can be agreed upon, but must be documented in the Supply Contract and/or Purchase Order.

2.2 QUALITY MANAGEMENT SYSTEM OF THE SUPPLIER

2.2.1 The Supplier must implement and maintain a quality management system with a goal of having zero defects, to continually improve delivery, product quality, and quality management systems. Supplier must have a documented improvement process.

2.2.2 Suppliers are encouraged to be certified to ISO 9001. And should have a plan to obtain this standard or be preapproved for other quality systems, any internal quality system will be reviewed by Skyjack on a case by case basis.

2.2.2.1 At a minimum, for all new suppliers, Supplier Quality or designee will complete a potential Supplier Audit for conformity to the ISO 9001 (Potential Supplier Assessment – XF-01C03) before approving the Supplier, with the exception of off the shelf or catalogue items. Suppliers may be audited annually at Skyjack Inc.'s discretion.

2.2.3 The environment is a priority to Skyjack Inc. and therefore Suppliers are encouraged to be certified to ISO 14001 or working toward certification to ISO 14001.

2.2.4 Calibration and Testing Service Suppliers shall be certified to ISO/IEC 17025.

2.2.5 All Suppliers shall inform Skyjack Supplier Quality of any changes to their processes in advance prior to any change being made (Supplier/Process Change Request FM-10337). Changes include but are not limited to Process Change, Material Change, Sub-Supplier Change, New equipment, Facility relocation. All changes may require PPAP.

2.2.6 Suppliers must inform Skyjack Purchasing immediately if any potential interruptions to material flow and/or quality disruptions that may impact production.

2.2.7 Suppliers will provide Skyjack access to Skyjack owned tooling. The Supplier is responsible for Skyjack tooling and its general maintenance. Reference to maintenance can be found under section 5(f) of Skyjacks General Security Agreement

2.3 QUALITY MANAGEMENT SYSTEM OF SUBCONTRACTOR

2.3.1 Skyjack requires its subcontractor to implement and maintain a comparable quality management system. Suppliers must notify Skyjack Purchasing of any change in the sub tier supply base.

2.3.2 Suppliers shall have a documented process to verify that incoming components and materials meet requirements.

2.3.3 Skyjack Supplier Quality may request evidence from the Supplier that they have verified the effectiveness of their subcontractors QMS, including APQP, problem solving and performance monitoring.

2.3.4 All Suppliers to Skyjack Inc. are responsible for the management and control of their own Suppliers. Sub-contractors that provide material / services with Control Characteristics must implement appropriate documented controls. Visits and audits conducted by Skyjack Inc. on Supplier's sub-contractors shall not be considered part of the management and control of the sub-contractor. Skyjack Inc. reserves the right to identify specific sub-contractors that provide unique product or services.

2.3.5 Code of Supplier Conduct

Skyjack subscribes to the Code of Conduct as described on our Public website www.linamar.com and listed below. All suppliers to Skyjack are expected to comply with this code as a minimum requirement. Skyjack Corporation reserves the right to audit any supplier's compliance to this code.

The guiding principles set forth in this Code require that we:

- foster an employee environment of opportunity and mutual respect;
- ensure our global operations, do not utilize child or forced labor, employees are free to work without intimidation, harassment or undue influence;
- remain committed to the continuous improvement of workplace health and safety;
- ensure our products' raw materials are comprised of "DRC conflict free" minerals in accordance with the Conflict Free Sourcing Initiative and ensure our suppliers do the same (see www.conflictreesourcing.org)
- focus on the satisfaction of the stakeholders on each leg of the Skyjack Stepping Stool (i.e. Employee, Customer, Financial)
- abide by all applicable environmental laws; and seek suppliers who agree to commit to the same principals in an effort to ensure adequate working conditions across our supply-chain.

2.3.6 REACH regulation Europe

To follow the regulations in Europe the seller warrants that the Goods comply in all respects with all statutory requirements (of any status) or regulations of the United Kingdom and/or European Union applicable thereto which shall be in force at the date of delivery and thereafter, and that the Seller has complied with all of its obligations in relation to the Goods under any such statutory requirements or

regulations, including, but not limited to, Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Directive 2002/95/EC restricting the use of certain hazardous substances in electrical and electronic equipment and Directive 2002/96/EC on waste electrical and electrical equipment (WEEE), including any and all domestic legislation enacting or incorporating these regulations and directives into law.

2.4 AUDITS

2.4.1 The Supplier must allow Skyjack Inc. to establish through audits whether its quality assurance procedures and policies fulfill the requirements defined in this manual. The audit can be a potential supplier assessment, or product/process audit. The Supplier will be notified in advance of the audit date.

2.4.2 The Supplier will allow Skyjack Inc.'s personnel and its customer representatives as applicable all reasonable access to verify, at the Suppliers manufacturing premises, that product and subcontracted product or service conforms to specified requirements. The Supplier will further allow access for Skyjack Inc. personnel to evaluate the Supplier's ability to sustain the contracted production capacity. The Skyjack Supplier Quality Engineer shall specify both the arrangements and method of performing these verifications

2.4.3 The Supplier is to grant Skyjack Inc. all reasonable access to all operating sites, checkpoints, stores, adjoining areas, and related quality documents required to complete the audit.

2.4.4 Skyjack Inc. may require the Supplier to implement corrective actions and/or action plans to improve product or processes based on the audit results. The plan must include responsibility and due dates for completion. Supplier will report the status of the plan per agreement to Skyjack Supplier Quality

2.4.5 When quality or other problems emerge that have been caused by products, services, and/or deliveries by the subcontractor of the Supplier, the Supplier is responsible for auditing their Supplier and identifying, implementing all required improvement actions. And SJ may choose to audit Tier 2-3

2.5 SUPPLIER SELECTION / AWARD PROCESS (RFQ / SELECTION)

2.5.1 The Skyjack Inc. Buyers will select Suppliers from the current supply base and other Supplier listings with the agreement of Skyjack Inc. Purchasing Management. Suggested or Customer selected Suppliers must be approved prior to award of business.

2.5.2 All present and potential Suppliers to Skyjack Inc. shall be able to demonstrate, with objective evidence, that they have implemented and maintain a Quality Management System that conforms or compliance to the requirements detailed in ISO 9001. Suppliers shall be reviewed and/or a self-audit may be accepted as an interim approval at the discretion of Skyjack Inc. Supplier Quality.

2.5.3 A Potential Supplier Assessment (PSA) by a Skyjack Inc. Supplier Quality Engineer on behalf of the Buyer may be required prior to the approval of a purchasing agreement. The PSA is structured to evaluate the Supplier's QMS conformance or compliance to ISO 9001. The PSA may contain additional requirements, which would be communicated to the supplier prior to the survey. Further, the Supplier

shall be able to demonstrate, upon request, compliance with local, national and international standards and regulations regarding health, safety and environmental issues relevant to the Supplier's business.

2.5.3.1 Pre-award/Technical review may be requested at *the discretion of the Buyer, a pre-award/technical review meeting for new or current Suppliers offering new products or services may be conducted prior to the commencement of supply. Technical, quality, manufacturing, engineering, purchasing, delivery, capacity and business issues shall be reviewed during this meeting to provide:*

- *the Supplier with a thorough understanding of Skyjack Inc.'s requirements and expectations and*
- *Skyjack Inc. a thorough understanding of the Supplier's capabilities, program risks and limitations.*

2.5.4 The Supplier quote must include tooling, equipment, gauging, and piece price costs along with PPAP timing and terms & conditions (Purchasing Order Terms and Conditions WI-PR-001) to Skyjack Inc. In some circumstances Suppliers may be required to identify subcontractors and/or Suppliers of raw material (i.e. steel mill) in their quote response.

2.5.5 The Supplier has accepted manufacturing feasibility of the product by submitting the quote to Skyjack Inc., unless explicitly noted on their quotation as an exception(s).

2.5.6 The Skyjack Inc. Buyer with input from the program team will select a Supplier based on quality (current or anticipated), tooling cost, piece price, timing, financial stability, and Supplier rating/performance.

2.5.7 *The Skyjack Corporation Buyer with input from the program team will select a Supplier based on quality (current or anticipated), tooling cost, piece price, timing, financial stability, and Supplier rating/performance. In Europe, significant energy use will also be taken into consideration for supplier selection, (ISO 50001).*

2.5.8 Skyjack Inc. will notify the nominated Supplier of the new business award by issuing a Letter of Intent to Purchase and/or a Purchase Order for the program.

2.6 PRODUCT/PROCESS DEVELOPMENT AND PLANNING (APQP)

2.6.1 GENERAL DEVELOPMENT REQUIREMENTS

2.6.1.1 The Supplier shall plan and develop quality systems and manufacturing processes required for product acceptance (PPAP) based on their quote and Skyjack Inc. program timing. The plan must facilitate communication within the organization to ensure all required steps are completed on time, at acceptable quality and cost levels.

2.6.1.2 Each Supplier shall develop a quality plan that promotes continual improvement in all activities such as quality, cost, and delivery and where appropriate, design and development. This plan shall include education and training in problem solving techniques (including statistical problem solving), employee involvement and Cost of Quality data analysis. The plan shall incorporate assigned responsibilities, target dates and regularly scheduled management reviews.

2.6.1.3 Documentation providing evidence of adherence to this plan shall be made available to the Buyer/SQE upon request. For any characteristic not meeting the capability criteria, a corrective action plan with applicable timing and responsibilities must be submitted to Skyjack Inc. Supplier Quality and/or the plant quality engineer for approval.

2.6.1.4 All correspondence, records and reports provided to Skyjack Inc. shall be in the unit of measure of the design data (specification, drawing etc.) identified on the Purchase Order.

2.6.1.5 Supplier must review and approve feasibility of the product required by Skyjack Inc. prior to initiating a quote and/or accepting a Purchase Order. Feasibility must include manufacturing, appearance, material performance, and any functional requirement based on customer product requirements.

2.6.1.6 All production part sample submissions shall include all requirements stated in Skyjack PPAP Requirements WI-10922. Any deviations from these requirements shall only be authorized by Skyjack Inc. Supplier Quality and/or the plant quality engineer. Other discretionary requirements will be clearly identified as a condition on the Purchase Order.

All PPAP submissions are preferred to be in electronic media.

Changes in Approved Processes

Unapproved changes are considered by Skyjack Inc. to be extremely serious and raise very significant risks to the Supplier, Skyjack Inc. and our customers. To ensure there is no misunderstanding of these conditions, Skyjack Inc. feels compelled to restate that the changes to a previously approved manufacturing process, including changes of sub-Suppliers, require the Supplier to contact the appropriate Buyer or Skyjack plant quality engineer. Revalidation testing and its associated costs may be required. Failure to comply with these requirements shall make the Supplier fully responsible for the absorption of all costs relating to any failures (including field failures) attributed to the change. Skyjack Inc. may choose to inform the Supplier's third party registrar of these violations. If there is any doubt on the part of a Supplier regarding the need for re PPAP of a previously approved component, it is strongly recommended that Skyjack Inc. Supplier Quality be consulted.

2.6.1.7 Skyjack Inc. expects its Suppliers to identify, document and communicate any issues or concerns with design, materials, performance, appearance, and durability based on their expertise, knowledge and lessons learned from similar products.

2.6.1.8 The Supplier is responsible for disposition of all product requirement concerns prior to accepting the Skyjack Inc. Purchase Order.

2.6.1.9 The Supplier must ensure confidentiality of Skyjack Inc. designs and specifications for products and processes under development. Skyjack Inc. will ensure confidentiality of Supplier's proprietary designs and processes under development. In highly sensitive cases a documented confidentiality or no compete agreement may be required between, Skyjack Inc., and Supplier (Skyjack Mutual Nondisclosure Agreement GL-00004).

2.6.1.10 The Supplier must allow Skyjack Inc. to review product and process development and planning via on-site review and confirmation during development or at any time during part production, if requested. (*Reference Process Control Plan Audit form XF-02-C03-01.*)

2.6.1.11 Supplier must notify Skyjack Inc. Purchasing/ Supplier Quality /Skyjack program manager if there is a change in program timing and a risk to meeting agreed upon tooling completion or PPAP date. Supplier will be required to add additional resources and/or work additional hours (7 Days, 24 Hours) to ensure date is met.

2.6.1.12 The qualification and approval of tools, equipment and gauges will be defined and controlled by Skyjack Inc. Approval may include process capability, gauge R&R, and PPAP.

2.6.1.13 Launch Process - It is the Supplier's responsibility to ensure all production processes are launched in such a manner that they will not adversely impact Skyjack Inc.'s production processes to meet timing and quantity. PDP Quality Engineering may schedule Launch Manufacturability Review Meetings with Supplier to ensure compliance with PPAP requirements.

2.6.2 DESIGN / PROCESS CONTROL

2.6.2.1 The Supplier shall have a process to control and react to design and process changes. The Supplier is responsible for verifying that the required Skyjack Inc. written approval or amended or new Purchase Order has been obtained prior to proceeding with any change.

2.6.2.2 The Supplier is responsible for change feasibility of their product to Purchase Order and Skyjack Inc. defined requirements.

2.6.2.3 All special and critical characteristics must be defined on all process control documents. (I.e. Drawings, Process Flows, Control Plans, PFMEA, Inspection Plans, etc...)

2.6.2.4 Supplier must have an effective continuous improvement process that reduces the Risk Priority Number (RPN) by operation.

2.6.2.5 SPC is recommended for all SC or CC dimensions and functions listed in the design record and control plan. Process capability is recommended to be documented and evaluated. All critical characteristics (CC) should be error proofed to prevent failure modes. 100% verification is required when acceptable capability is not demonstrated.

A significant characteristic is a feature of any component/process, which requires particular attention on the part/process of the manufacturer to ensure conformance to the specification. Some examples are the application of special symbols on the engineering drawings, material & process specifications and appearance on a control characteristic list.

Minimum required ongoing process capability indices for all SC's shall be Cpk 1.33 minimum where index is chosen.

Those items not meeting the capability criteria will be inspected 100% until capability is resolved. Skyjack has right to request the corrective action plan to obtain $Cpk \geq 1.33$.

2.6.2.6 Error proofing sensors and function must be verified with and documented when applicable.

2.6.2.7 The supplier shall monitor capability data on an ongoing basis and maintain records when applicable. Skyjack has the option to request this capability data on a periodic basis.

2.6.3 PROCESS APPROVAL

2.6.3.1 Process requirements and documentation at a minimum must meet the regulatory/statutory requirements. Skyjack Inc. may require additional evaluation or records as required.

2.6.3.2 The Supplier shall provide and maintain a timing plan to meet the contract agreement. Timing status will be submitted to the identified Skyjack Inc. team members.

2.6.3.3 Equipment, tooling, and components will be evaluated and approved based on drawing or specified requirements and capability evaluation when applicable. Capital equipment requires buyoff at the Supplier and Skyjack Inc. plant unless otherwise agreed upon.

2.6.3.4 Equipment and tooling owned by Skyjack must be identified with an Asset Tag provided by Skyjack and verified prior to PPAP approval. A picture of the tag affixed to the tooling should be sent with the PPAP package showing compliance to this requirement.

2.6.3.5 Special Processes and Shop Practice Standards shall be assessed using the document listed below as applicable:

CSA W47.1 – Certification of companies for fusion welding of steel

WI-EV-1034 – Skyjack Paint Inspection Standard

SPS-PM-001 – Shop Practice Standard General Policies

SPS-PM-016 Acceptance Criteria for Paint Defects

CQI-9-Heat Treating assessment

CQI-11-Plating assessment

CQI-12-Coating assessment

CQI-15-Welding assessment

CQI-17-Soldering assessment

CQI-18 Effective Error Proofing

CQI-20 Effective Problem Solving

CQI-22 Cost of Poor Quality Guide

CQI-23-Molding assessment

CQI-27-Casting System assessment

2.6.3.6 The Supplier furnishing materials, component parts, or assemblies that require protective coatings such as primers and enamels, must accomplish all cleaning and surface preparations as outlined on the drawing or the purchase order prior to the application of the finish coatings. The primer and/or enamel/polyurethane/epoxy applications must be accomplished using products that are procured in accordance with the applicable purchase order. In certain instances, the purchase order may contain specific instructions regarding paint applications to facilitate subsequent operations.

2.6.4 PROTOTYPE PARTS

2.6.4.1 The goal is to manufacture prototype parts using a production process and tools. But, at a minimum the Supplier must use process planning (flow charts, control plans, inspection plans, and work instructions) to define and implement the prototype build. All special and critical characteristics must be documented on all process control documents.

2.6.4.2 Prototype parts must meet all drawing requirements prior to shipment. Supplier must have a dimensional plan to layout or CMM parts to show conformance to drawing requirements for each serial numbered part, as required. Quantity of parts inspected will be documented in the specific build plan. Engineering prototype parts with documentation of specification conformance shall be submitted for engineering validation testing. Documentation shall meet Skyjack requirements.

2.6.5 TEST EQUIPMENT AND GAUGES

2.6.5.1 All test equipment and gauges must be calibrated traceable to NIST.

2.6.5.2 A test and inspection plan must be developed to measure all dimensions or functions and SC or CC requirements in the design record based on the control plan. Variable data is required for all SC and/or CC characteristics unless otherwise authorized in writing by Skyjack Inc. Supplier Quality and/or plant Quality Engineer.

2.6.5.3 The gage repeatability and reproducibility (GR&R) goal shall be to consume <10% of product tolerance, based on cost and feasibility. Skyjack Inc. may accept a GR&R at < 20%. GRR of >20% must have a corrective action plan to develop the gauge and improve the GR&R to <20%. If <20% is not realized, Skyjack Inc. Supplier Quality may approve GR&R up to <30% based on product criteria and cost/benefit analysis of data.

2.6.5.4 Skyjack Inc. Supplier Quality may, at its discretion, require full MSA, gauge correlation studies, boundary samples and detailed measurement process instructions to assure comparable measurement results.

2.6.5.5 All test equipment or gauges purchased through a Skyjack Inc. Purchase Order must be permanently identified.

2.6.6 PLANNING OF PROCESS EQUIPMENT/ PREVENTIVE MAINTENANCE

2.6.6.1 Supplier's manufacturing processes and operating equipment must be planned and developed with sufficient capacity to produce the required features within tolerance at the specified part volume. Unless otherwise agreed to in writing by Skyjack Inc. Purchasing, Supplier shall have sufficient capacity in place to meet contracted volumes on a 5 day, 3 shift operating pattern when applicable. Supplier shall also have the capacity/ability to meet a 20% increase in contracted volumes at no additional cost to Skyjack Inc.

2.6.6.2 The process plan includes the Process FMEA development and improvement actions when applicable.

2.6.6.3 The capability of operating equipment and processes must be demonstrated when applicable.

2.6.6.4 The Supplier must have a documented process and schedule for preventive maintenance when applicable. The maintenance schedule must include all Skyjack Inc. owned equipment and tooling. Supplier is responsible for identifying and stocking critical spare parts. SJ may request evidence of PM schedule as well as tolling audits and frequencies.

2.6.6.5 Dies, Patterns, Molds, and Special Tooling

2.6.6.6 The Supplier shall establish preventive/predictive maintenance programs on all tooling. Evidence of program execution shall be available upon request. Preventive maintenance schedules and tool history records along with Asset Tags shall be documented and available for review. Prior to disposition of Skyjack Inc. owned tooling Supplier shall obtain permission in writing.

2.6.6.7 There shall be no additional tooling charges above those at the beginning of the program as applicable. The Supplier is responsible for tooling replacement costs and day to day routine maintenance.

2.6.6.8 Tooling, drawings and documentation owned by Skyjack shall remain the property of Skyjack and shall be clearly marked "Property of Skyjack". The aforementioned must be used solely for Skyjack production, unless otherwise authorized. The Supplier shall maintain all tooling and fixtures to the latest engineering revision at all times. Skyjack reserves all rights of inspection or removal of all tooling and fixtures at any time, at no cost to Skyjack With the exception of freight charges.

2.6.7 PACKAGING PLAN / PRODUCT IDENTIFICATION

2.6.7.1 Packaging must be developed and defined to eliminate damage during transportation and storage. Ergonomic handling and environmental criteria must be considered along with inventory restrictions, optimum pack size, and cost.

Material shall be packaged in such a manner that ensures integrity of each piece during all aspects of normal transit. Unless otherwise agreed to in writing, material shall also be protected from corrosion for 30 days after delivery. Each shipping container, box, rack, package etc. must be identified with, at a minimum, the Suppliers Name, Part Name, Part Number, Revision Level, Quantity and Date of Shipment. Specific requirements for packaging and identification will be clearly identified as a condition on the Purchase Order.

MSDS sheets and WHMIS labels must accompany every shipment that contains hazardous materials.

Note: Cleanliness requirements may be added to packaging requirements.

2.6.7.2 If no specific requirements for packaging are defined by Skyjack Inc., the Supplier must define the packaging agreement with Skyjack Inc. Purchasing prior to production PPAP and or delivery.

Transportation and/or packaging trials may be required prior to standard operation to confirm robustness of dunnage to protect product.

2.6.7.3 The Supplier must ensure identification and traceability of products supplied. This identification includes labeling of packaged products, manufacturing location, manufacturing date, part identification and part number etc. PPAP shipment must meet the Skyjack labeling requirement. All EDI suppliers are required to comply with the Skyjack EDI mandate specified in Skyjack EDI Vendor Compliance ST-10012 and Skyjack Barcode Product Label Supplier Documentation WI-11466.

2.6.7.4 Bar stock shipped in heat code batches must be segregated according to heat codes. Parts must not be mixed in containers and containers must be identified accordingly. All bar ends must be sent with cut pieces in the appropriate containers.

Material shipped to you for processing will have a traceability identifier. Each traceability identifier lot must be kept separate and documented accordingly.

2.6.8 TRAINING

2.6.8.1 The Supplier's employees must be competent and qualified for their job function through education, training and experience. A training record/certificate should be available for all employees producing a product or service for Skyjack Inc. and that employee should be made aware of all Skyjack requirements relating to its products.

2.6.8.2 All shifts shall be staffed with personnel responsible for ensuring part or product quality.

2.6.9 INITIAL PPAP SAMPLES

2.6.9.1 The Supplier is to submit for approval the manufactured first samples off the production process and tooling in the agreed amount. Dimensional results (APQP Dimensional Test Results FM-PD-021) are required per Skyjack Quality Engineer's requirements. All supplied parts shall have a PPAP submitted for approval (APQP Part Submission Warrant FM-PD-025).

Inspection frequency for capable processes will be per the control plan when applicable. Non-capable processes require 100 % gauging or inspection or as agreed upon with Skyjack Inc. Supplier Quality.

2.6.9.2 Supplier shall submit Level 3 PPAP documentation at a minimum unless otherwise agreed upon in writing from a Skyjack Inc. Supplier/PDP Quality Engineer or Plant Quality Engineer.

2.6.9.3 The Supplier must provide verification of the composition of the materials used and their individual components as well as aspects relating to the environment. PPAP shall include PSW and material certifications along with Material Test Results Summary Sheet FM-10485 for all purchased components or services. PPAP shall include MSDS for any rust preventative or coating.

2.6.9.4 Mule and Prototype Orders:

The supplier shall submit the following for mule and prototype purchase orders:

- Ballooned Drawing
- Dimensional Layout for all parts and their subcomponents
- Material and Finish Certifications for all parts and their subcomponents
- Performance Test Reports

2.6.9.5 Production PPAP Orders:

The supplier shall be required to comply with the applicable PPAP submission level as defined below or as directed by Skyjack:

- Level 1 - Warrant only (for appearance items, see Appearance Approval Report, Engineering change does not affect product or process)
- Level 2 - Warrant with product samples and limited supporting data. (Engineering Change affecting product or process)
- Level 3 - Warrant with product samples and complete supporting data (New part, product, process)

2.6.9.6 General Submission Requirements:

- PPAP documentation must be submitted electronically in advance and prior to the parts arriving to the appropriate Purchasing Coordinator / Buyer/PDP Quality/Quality Engineer. The PPAP shall also be submitted with the parts and if so, it must be secured to the shipment in an envelope identified as “PPAP documents” and be separate from shipping documents.
 - *Note: Skyjack can provide electronic blank copies of required documentation; suppliers may use their own comparable documentation. Contact your appropriate Skyjack Quality Engineer if you have any questions regarding PPAP submission requirements.*

- *For PDP submissions all suppliers are to send PPAPs electronically to SJPDP.Quality@skyjack.com*
- The submission package must be neatly organized by element in a manner that is easy to understand and allows for efficient customer review. This includes a clear correlation between all drawing requirements and the dimensional and material/performance test results.
- The Supplier Sample Submission Checklist (FM-10623) must be completed by the supplier assuring that the submission meets Skyjacks expectations.
- An updated Control Plan should be submitted with all PPAP submissions. Process Flow Diagrams (PFD), Process Failure Mode and Effects Analysis (PFMEA), and Control Plans (CP) must flow smoothly from one to the next and should be consistent. They must all have the same process numbers or steps identified on each.
- Documentation must reflect the specific information (i.e. part/drawing numbers, part/drawing revisions, supplier name, etc.). A copy of the part drawing or design record (matching the latest revision requested) must be submitted for review. The drawing must be ballooned, that is all key dimensions, functional requirements, material call-outs and surface finish requirements,, etc. must be labeled or numbered in an orderly fashion and correspond with the Dimensional/Material/Performance results.
- Corresponding 100% dimensional layout inspection report shall be conducted on a minimum of 6 pieces for on all parts and their subcomponents.
 - CMM layouts to be performed on all GD&T dimensions
 - Weldments, castings, forgings, plastics or rubber parts being made from more than one fixture, nest, cavity, mold, tool, die, pattern, or unique manufacturing production, i.e. cells or production lines require a minimum of 1 part from each mold or cavity to be 100% dimensionally laid out or as defined by Skyjack.
- Corresponding material and finish certifications must be submitted to Skyjack for all parts and their subcomponents and shall be supported by inspection and test data for specifications covering raw material, process material, plating, finishing, heat treating, functional requirements, welds, etc. All material certifications must be no more than 1 year old.
- Any deviation from a PPAP submission or drawing requirement requires an approved Supplier Deviation Request (FM-PR-003) to be submitted to the buyer for Skyjack Design and/or Quality for review and approval prior to PPAP submission. If approved, the SDR must be submitted with the PPAP.
- Disposition of the PPAP by Skyjack PDP Quality:
 - *The PPAP will be approved if it complies with all the required documentation and the parts are compliant to the print and specifications.*

- The PPAP will be interim approved if there are issues identified on the documentation and supplier presented a plan to Skyjack PDP Quality for improvement. Only missing documentation will have to be re-submitted.
 - The PPAP will be rejected if parts are not to print or specifications or there is missing documentation and there is not an improvement plan presented to Skyjack PDP Quality. The PPAP must be fully re-submitted if it was rejected, new samples must be sent to SJ PDP Quality and a complete PPAP package.
- Skyjack has established a PPAP validation requirement that further defines submission levels, including what the supplier submits and/or retains (See Figure 1).

Figure 1

✓ = Submit R = Retain, Submit if requested				
REQUIRED DOCUMENTATION		1	2	3
1)	Ballooned Drawing	R	✓	✓
2)	Engineering Change Documents, if any	R	R	✓
3)	DFMEA	R	R	✓
4)	Process Flow Diagram	R	R	✓
5)	PFMEA	R	R	✓
6)	Control Plan	R	R	✓
7)	MSA Studies	R	R	✓
8)	Dimensional Results	R	✓	✓
9)	Material/Performance Test Results	R	✓	✓
	Raw Material Certifications	R	✓	✓
	Salt Spray Test Results	R	✓	✓
	Plating Thickness Certification	R	✓	✓
10)	Process Capability	R	R	✓
11)	Lab Scope & Accreditations	R	✓	✓
12)	AAR	P	✓	✓
13)	Sample Production Parts	R	✓	✓
14)	Master Sample	R	R	R
15)	Checking Aids	R	R	R
16)	Customer-specifics	R	R	✓
	Example of Label per SQM	R	✓	✓
	CQI Assessments	R	✓	✓
17)	PSW (Part Submission Warrant)	✓	✓	✓
19)	SSSC (Supplier Sample Submission Checklist)	✓	✓	✓

2.6.9.7 Supplier Product or Process Changes:

The supplier is required to submit a Supplier Change Request (FM-10622) for product or process changes and obtain Skyjack approval prior to implementing the change.

Approval to proceed will initiate the PPAP approval process whenever any of the following occur:

New Part or Product;

- A new part or product (i.e. a specific part material or process not previously supplied to Skyjack)
- Correction of a discrepancy on a previously submitted part

Part Change;

- Product modified by an engineering change to design records, specification or materials

- Use of another optional material other than what was used in the previously approved part

Process Change:

- Production from new or modified tools, dies, molds, etc., including additional or placement tooling
- Production following any change in the process or method of manufacture

Location Change:

- Production from tooling and equipment transferred to a different plant location or from an additional plant location
- Change of source for subcontracted parts, materials, or services (i.e. heat treating, plating, etc.)

2.6.9.8 Initial Production Shipments - Post PPAP Approval/Safe Launch

- The supplier is required to 100% certify the initial first 3 shipments or as agreed upon based on volumes after the Pre-Production PPAP has been approved for a new model for both visual and key/critical dimensions
- Safe Launch Containment Exit Criteria:
 - All 3 shipments must meet visual, performance and dimensional requirements with no rejections.
 - If the exit criteria has not been met, an NCR will be issued and the containment period will be extended
 - Any NCR's must be closed with accompanying 8D that will have all items verified and validated
- Dimensional, performance and appearance records are to be maintained at the supplier's facility and made available for the customer's review if required.

2.6.9.9 Labeling Requirements

- PPAP parts must be shipped separately from production parts and must be shipped to the attention of the Quality Engineer identified by Purchase Order.
- PPAP samples must be identified with the appropriate labels and must be applied in a manner visible to Skyjack Receiving personnel, multiple copies are often required. Of shipping label is identified in the PO.
 - Prototype Samples – Orange Prototype Samples New Model Tag (FM-PD-027)
 - Production PPAP Samples - Green Pre-Production Samples (PPAP) New Model Tag (FM-PD-026)
 - Initial Production Shipments – blue Initial Samples New Model Tag (FM-PD-028)

2.6.10 RE-SUBMISSION OF PPAP

The Supplier must submit a new PPAP package per Skyjack requirements and includes:

- Changes to manufacturing materials (also from subcontractors) defined in the process documents, specifications, and design record.
- Change to process steps or elimination of a process step.
- Changes to the inspection process / equipment defined in the process documents.
- Change of subcontractors.
- Transfer of manufacturing or subcontractor location.
- Transfer of the manufacturing equipment within the location, if and only if, the process sequence or process steps change.
- New start-up after decommissioning of 12 months or more.
- Rework processes whether in process or off line

Under certain circumstances Skyjack Inc. Supplier Quality may require an exit PPAP to facilitate the transition of tools from one location or machine to another and/or at the conclusion of a serial production program.

Annual Validation:

- The supplier must conduct a complete annual layout of all parts and their subcomponents to verify that the part meets all dimensional and material/finish requirements identified on the drawing. This report must be kept on file by the supplier and provided to Skyjack within 24 hours upon request.

2.6.11 Age Control

A Supplier supplying adhesives, rubber, hose, hose assemblies, paint and primers etc. shall mark the parts and the exterior of the shipping container in accordance with applicable specification. The date of manufacture and expiration date (quarter and year) is required as applicable. The period commencing with the date of manufacture and ending with the earlier of the acceptance at Skyjacks facility or half of the standard shelf life of the product shall not exceed six months.

Test data (composition of rubber and applicable physical characteristics such as ozone resistance, tension, adhesion, tear resistance, hardness, fluid immersion, etc.) must be submitted by the Supplier to Skyjack for each shipment of parts.

Note: Rubber test data is not required when the rubber is used solely for insulation, unless specifically requested by Skyjack.

2.6.12 ACCEPTANCE TESTS / TEST CERTIFICATES

Acceptance and test certificates are not required for PPAP product shipments, unless specified. The Supplier must record all test and acceptance data and file it in the case that Skyjack Corporation requests to review the documents.

The Supplier is stating in the PPAP that the goods delivered are free of defects, have guaranteed characteristics and correspond to the requirements defined in the design and process records.

Certificate of Conformance (C of C). When a C of C is identified as a condition on the Purchase Order, a copy of the C of C will be required to accompany each shipment of the specified material. The actual content of the C of C will be clearly identified as a condition on the Purchase Order.

Customer Specific Requirements

Due to the globalization and diversification of Skyjack Corporation's operations; federal, industry, customer and plant specific requirements will be necessary to ensure conformance to those regulations. These specific requirements may be clearly identified and made a condition of the Purchase Order to which they are relevant.

Record retention as defined per the Quality Management System and customer specifics. Records must be available for review within twenty-four (24) hours.

2.7 SUPPLY CHAIN MANAGEMENT

2.7.1 SUPPLIER COMMITMENT

2.7.1.1 Skyjack Inc. has high expectations of all Suppliers and will seek to work with Suppliers that demonstrate a strong commitment to quality improvement, continuous improvement and cost savings.

2.7.2 SUPPLIER DEVELOPMENT

2.7.2.1 Skyjack Inc. will prioritize Supplier development projects or plans based on Supplier performance ratings and importance of the product or component to product quality and customer satisfaction.

2.7.2.2 A Supplier development plan or Skyjack Step Up To Green Program reference form XF-11-C03-01 shall be initiated based on quality and delivery performance.

2.7.2.3 Supplier development plans may include support in Quality Systems, Lean Manufacturing, Six-Sigma, team oriented problem solving, etc.

2.7.3 CONTROLLED SHIPPING

2.7.3.1 Based on continued poor quality and/or delivery performance a Supplier may be notified by Skyjack Corporation that controlled shipping is required to protect Skyjack Corporation and their customer from further problems. Skyjack Corporation Supplier Quality shall identify specific defect or concern to be controlled.

2.7.3.2 Controlled shipping (CS) has two levels:

Level CS-1 – The Supplier must identify specific personnel to monitor, measure, inspect and certify all product(s) shipped to Skyjack Corporation and identify all products that were inspected. A report must be generated that identifies the type and quantity of defects or problems that were found by the CS-1 inspection. Skyjack Corporation may request to review the rejected material and/or any report

pertaining to the concern. The additional inspection must be separate and distinct from production operations.

Level CS-2 – Supplier must employ an independent third party to monitor, measure, inspect, and certify all products. All certified products must be marked and identified. A report must be generated that identifies the type and quantity of defects or problems that were found by the CS-2 inspection and sent to the responsible Skyjack Corporation Supplier Quality Engineer and/or plant Quality Engineer. The Supplier must identify the CS-2 organization responsible to Skyjack Corporation Supplier Quality personnel. If the Supplier refuses to comply with CS-2 request then Skyjack Corporation at our discretion may set-up CS-2 at their facility and charge back the cost to the Supplier. CS-1 operations are required to continue while CS-2 is in effect. Once CS-2 is terminated, defect free days begin to accumulate toward exit from CS-1. CS-2 is initiated by letter from the Director of Supplier Quality and the affected Plant Quality Manager. Reference form XF-10-C03-01.

A Supplier will be removed from controlled shipping when **All Corrective Actions** have been implemented and validated and inspection data shows a stable defect free process for a minimum of twenty consecutive production days for the specific defect or concern. Skyjack Corporation Supplier Quality and/or plant quality engineer will review the data and current issues and if acceptable will remove the Supplier from controlled shipping. Exit is granted via letter (reference form XF-10-C03-01)

2.8 SUPPLIER RATING / EVALUATION

2.8.1 EVALUATION OF APPROVED SUPPLIERS

2.8.1.1 Performance Monitoring and Reporting:

Ongoing performance to key parameters is monitored and reported utilizing the Skyjack Supplier Scorecard System (Supplier Scorecard Procedure PR-10015). This system is used to determine the Supplier's performance to requirements, efforts on improvement and is a key tool in determining new business awards. It is reported to the Supply Base regularly via electronic media. When Supplier contact information changes (example; new contact for Quality at the Supplier's location) the Supplier should report the changes to Skyjack Inc., this will enable Skyjack Inc. to update databases to ensure continued uninterrupted performance feedback to Suppliers.

2.8.1.2 Delivery

Skyjacks expectation is for all suppliers to maintain an effective FIFO inventory system to support our 100% on-time delivery requirement. The supplier shall notify the Skyjack plant materials planner within 24 hours of a production interruption. A production interruption is defined as an inability to meet the Skyjack specified production requirements.

2.8.2 SUPPLIER CHARGE BACK / DEBIT

2.8.2.1 SUPPLIER PRODUCT SHIPPED TO SKYJACK CORPORATION FACILITIES

2.8.2.2 In the event that non-conforming material is received by Skyjack Inc. The Supplier is required to take immediate containment action in less than 24 hours to isolate Skyjack Inc. from further delivery of defective material. The Supplier needs to provide a detailed problem solving analysis and 8D within 15 days. If additional time is necessary the Supplier must contact their Skyjack Inc. Supplier Quality Engineer to explain the reason. Skyjack format will be used to document the permanent corrective action. Supplier format may be accepted at Skyjack Inc. Supplier Quality Engineer’s discretion.

2.8.2.3 Costs incurred by Skyjack Inc. due to poor product quality, non-conforming product, and delivery based on contractual requirements will be subject to following administrative charges:

# of occurrence	Charges (CAD)	8D Corrective Action
1	\$150.00	Not Required
2	\$300.00	Required
3	\$600.00	Required

2.8.2.4 Suppliers are expected to sort defective material delivered to Skyjack Inc. facilities. If necessary to maintain production, Skyjack Inc. may sort defective material at the Supplier’s expense.

2.8.2.5 Skyjack Inc. expects that all Suppliers deliver material ready for use without the need for incoming inspection.

2.8.2.6 Special circumstances or unusual situations will be handled on a case-by-case basis through Skyjack Inc.

2.9 SUPPLIER PRODUCT SHIPPED DIRECTLY TO THE CUSTOMER

2.9.1 If Skyjack Inc. receives a rejection from the customer on a direct shipped product; the Supplier is fully responsible for the following costs:

- Skyjack Inc. travel costs to attend meetings at the customer facility to correct or support a quality or delivery issue.
- All costs related to Controlled Shipping Level CS-1 and/or Controlled Shipping Level CS-2.
- Sorting, replacement of parts, expedited shipments, and other charges incurred because of an issue with the Suppliers product.

2.10 LINE STOPPAGE CHARGES

2.10.1 All Main Assembly Line stoppages and interruptions caused by the receipt of non-conforming parts will be charged to the supplier @ **\$132.00 (CAD) per minute of Line Stoppage / Interruption**

2.10.2 All Sub-assembly line stoppages and interruptions caused by the receipt of non-conforming parts will be charged to supplier @ **\$70.00 (CAD) per hour of Line Stoppage / Interruption**

2.10.3 Supplier has four options when non-conforming material occurred:

1. Allow the return of the defective part / lot. There will be a RTV charge of \$250.00 Cdn plus the cost of inbound freight. RTV charges of \$250.00(CAD) will not apply while main assembly line stoppage charges are incurred.
2. Authorize parts to be scrapped at Skyjack within 72 hours else parts will be scrapped at the Supplier's expense.
3. Authorize Skyjack/representative or third party sorting company to sort parts at supplier's expense to feed production and to detect defects prior to line use.
4. Authorize Skyjack to rework internally and if parts need to be outsourced the supplier shall assume responsibility for all costs.

2.11 PRODUCT / SUPPLIER RE-SOURCING

2.11.1 Upon request, the Supplier shall provide a detailed list of Skyjack Inc. owned tooling and gauges along with specific capital equipment attached to the tooling to complete the current process. Skyjack Inc. may request an exit PPAP, including tooling models, and CMM programs.

2.11.2 If a Supplier continues to have quality or delivery issues with Skyjack Inc., re-sourcing of that product to a different Supplier may be considered.

2.11.3. Supplier is required to provide product up to the contract and additional amounts as required building the necessary product bank to protect product availability and quality to Skyjack.

2.11.4 Skyjack Inc. may witness the build out, transfer of tooling, gauges and address any issues or concerns that arise during the process.

3.0 NON CONFORMING MATERIALS

3.1 Non-Conforming Material-Immediate Action:

Suppliers are required to inform Skyjack Inc. as soon as non-conforming material is discovered.

Upon discovery of a Supplier non-conformance all suspect material, at all points of manufacture including parts in transit will be placed in quarantine until one of the following conditions is met:

- Product is confirmed to be conforming
- An Engineering Deviation is approved
- Product is reworked and verified for conformance via an approved rework Procedure
- Product is scrapped

The Supplier is required to account for and document the disposition of all non-conforming material. Skyjack Inc. at its sole discretion may request formal confirmation/photos of the disposal and/or scrapping of nonconforming or obsolete material.

3.2 Non-conforming Material - Corrective Action Reports:

An 8D will be issued when Skyjack receives material or services that fail to conform to outlined specification. The 8D shall detail the root cause of the non-conformance, and the corrective actions

implemented to prevent future recurrence as a result of the identified root cause. This response should also include an updated FMEA, Control Plan and verification of the effectiveness when applicable.

An 8D will also be issued when there is evidence of a systemic failure of Suppliers QMS (e.g. repeat occurrences, failure to inform Skyjack Inc. of a known quality issue, failure to implement corrective actions or lack of responsiveness, delivery).

3.3 DEVIATIONS FOR NON-CONFORMING MATERIAL

Skyjack does not accept products that do not meet the required specifications. However, in the rare case of exceptional circumstances, Suppliers may approach Skyjack Inc. for relief of specific requirements. Skyjack Inc. may choose to request a concession on non-conforming material. Requests should be submitted to the Skyjack Inc. through Engineering using Supplier Deviation Request FM-PR-003. Any such request must be accompanied with a completed 8D and any statistical or process capability data necessary to support the request. Any and all costs relating to a deviation are the responsibility of the Supplier. Supplier must not ship without a formal deviation authorization.

4.0 REFERENCE DOCUMENTS

- GL-00004 Skyjack Mutual Nondisclosure Agreement
- WSPS-PM-001 General Policies – Preface (Skyjack supplier only)
- ST-10012 Skyjack EDI Vendor Compliance
- PR-10015 Skyjack Supplier Scorecard Procedure
- WI-10922 Skyjack PPAP Requirements
- WI-11466 Skyjack Barcode Product Label Supplier Documentation
- FM-10337 Skyjack Supplier / Process Change Request
- FM-10485 Material Test Results Summary Sheet
- FM-PR-003 Skyjack Supplier Deviation Request
- FM-PD-026 Skyjack Pre-Production PPAP Samples Form
- FM-PD-027 Skyjack Prototype Samples Form
- FM-PD-028 Skyjack Production Samples Form
- FM-PD-025 Skyjack APQP Part Submission Warrant
- FM-PD-021 Skyjack APQP Dimensional Test Results
- FM-CI-008 8D Corrective Action

Revision History				
Rev	Description of Change	Changed By	Approved By	Issue Date
A	Original Issue	-	Goran Kopic, Rupesh Parikh, Betty Goulart, Veronica Villarreal	12-14-2018