IMI
Precision Engineering

Supplier Performance Manual

January 2021

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IMI Precision Supplier Performance Manual

Issue Log

Issue 6/07	Initial Release
Issue 9/07	Added Supplier Selection, Customer Disruptions and Special Status, Premium Freight, Supplier Performance Reaction Plan, Cost of Poor Quality and Supplier Development Section.
Issue 4/08	Added Issue Log, Supplier Categorization, Supplier-Initiated Cost Reduction Measurement, IMI Precision PPAP Definition and Levels, Reasons for PPAP, Measurement Accuracy Sections and Appendix B. Modified Supplier Selection, Supplier Development, Customer Disruptions, Special Status & Premium Freight, PPV, SSR, and Scoring Sections.
Issue 7/11	Revised and updated for new scorecard release.
Issue 5/15	Revised and updated to include Rest of World rather than just Americas, Logo change and an update in Supplier Performance rating targets, aligning them to customers' expectations.
Issue 3/17	Revised to include changes in the way suppliers are measured changes in the vision IMI have regarding goods inwards inspection and the revised Product Approval Process with associated tools. This is to reflect the change of emphasis in the way IMI work with suppliers.
Issue 1/18	Update Standards to latest issue and minor formatting changes.
Issue 12/18	General update mainly to suit suppliers who are design responsible
Issue 07/19	Update of rules around Supplier PPM. Section of on supplier delivery concern reports added
Issue 01/21	Update on rules for supplier delivery performance. Customer requirements updated. Compliance regulations updated

1. Introduction & Objectives

IMI Precision Engineering is an industry leader in specialized products which support numerous markets including Commercial Vehicle, Energy, Industrial Automation, Rail, Food & Beverage and Life Sciences.

Quality materials, excellent workmanship, timely delivery and a commitment to continuous improvement are elements that differentiate us from our competitors and continue to support our success and growth in these markets.

Over the years, our customer base has continued to adopt more stringent requirements related to quality, delivery and cost. We acknowledge that having a supply base that can perform at high levels of excellence will be critical to meeting these ever-increasing demands, ultimately resulting in success for both parties. Therefore, IMI Precision Engineering is committed to partner with our supply base to achieve the following expectations:

- *Quality expectations: zero defect receipts*
- *Deliver expectations: 100% on-time delivery of product*
- *Cost: ongoing productivity improvements and competitive costing*

This Supplier Performance Manual supports our commitment to achieving customer requirements and performance expectations. IMI also recognizes the necessity to develop a formal Supplier Development System based on performance partnership. Only by working with and developing the supply base will IMI Precision continue to grow. This system will be the tool to achieve our objective of continual supplier development and performance improvement.

2. Expectation

Unless otherwise specified by IMI Precision, production suppliers shall be third party registered to the latest version of either ISO 9001:2015 or IATF 16949:2016 by an accredited third-party certification body and will support a continuous improvement culture. Suppliers registered to ISO 9001:2015 will be encouraged to work toward achieving IATF 16949:2016 compliance or certification as applicable, as it is envisioned that this will become the minimum requirement in the future. Inspection, test and calibration, whether done internally or with external suppliers, will need to be conducted by suppliers accredited to ISO/IEC 17025:2005 or another national equivalent,

IMI Precision Engineering's policy is to work with suppliers who do not expose their employees or their local environment to unacceptable risks. It's IMI Precision Engineering's objective to work with suppliers who meet or exceed minimum standards, or who can demonstrate progression towards these standards over an agreed and suitable timescale. The supplier's declaration of compliance with IMI Precision Engineering's Supply Chain Policy and responsible business standards are required. For a more detailed understanding of this requirement please contact your local IMI Precision Engineering team.

IMI Precision Engineering's policy is to receive products on time from suppliers with zero defects allowing products to move directly to stock or to point of use; Purchased Product Quality Verification is the suppliers responsibility hence any additional costs associated with receiving inspection may be charged back to Suppliers including costs to inspect, sort, evaluate, and/or return products that do not meet requirements. IMI Precision Engineering will administer this based on individual part numbers, product families, or overall supplier performance.

3. Supplier Selection

IMI Precision Engineering will evaluate, select and nominate suppliers based on their ability to supply products in accordance with IMI Precision Engineering's requirements. Evaluation may include, but is not limited to, an onsite Supplier Assessment Survey. Other requirements will be the confirmation of the Supplier Statement of Work and Feasibility Commitment. The supplier will also be assessed for risk where suppliers will be expected to provide supporting data.

4. Supplier Categorization

IMI Precision Engineering will categorize suppliers based on such criteria as annual spend, supply chain risk and alignment with IMI Precision Engineering key performance indicators. Key suppliers are those suppliers that rank highly in the categorization criteria. IMI Precision Engineering's objective is to monitor performance and develop partnerships with key suppliers.

5. Supplier Monitoring and Development

IMI Precision Engineering is committed to working with all suppliers to develop and improve their own quality management systems. IMI Precision Engineering monitors the performance of all suppliers and will issue a scorecard to suppliers as deemed necessary. Key suppliers may receive the supplier performance scorecard at least quarterly and may be requested to participate with IMI Precision Engineering to achieve its goals. The IMI Precision Engineering goal is to builds partnerships with suppliers by establishing targets for continual performance and capability improvement, resulting in mutual business growth and success.

IMI Precision Engineering supplier performance improvements and development efforts shall be concentrated on supplier quality management system development with the goal of supplier conformity with applicable ISO 9001:2015 and/or IATF 16949:2016 requirements. When there are mergers, acquisitions or affiliations associated with suppliers, IMI Precision Engineering may choose to perform an on-site audit to ensure continuity of the supplier's quality management system and its effectiveness.

6. Supplier Scorecard – Supplier Performance Measurement System

IMI Precision Engineering will score all suppliers based upon the supplier performance measurement system detailed below. The measurement system will enable IMI Precision Engineering to:

- *Place new business*
- *Promote supplier-lead improvements through performance information feedback*
- *Establish a baseline for supplier development and corrective actions*
- *Identify high performing suppliers*

Regardless of score, positive trends in performance history will give a supplier increased opportunity to maintain and bid on new business with IMI Precision Engineering.

The supplier performance scorecard will show but not limited to the items below:

- *Supplier Quality Performance (PPM)*
- *Instances of Non-Conforming Material*
- *Supplier On-Time Delivery in Full (% SOTIF)*

Supplier on Time in Full (SOTIF)

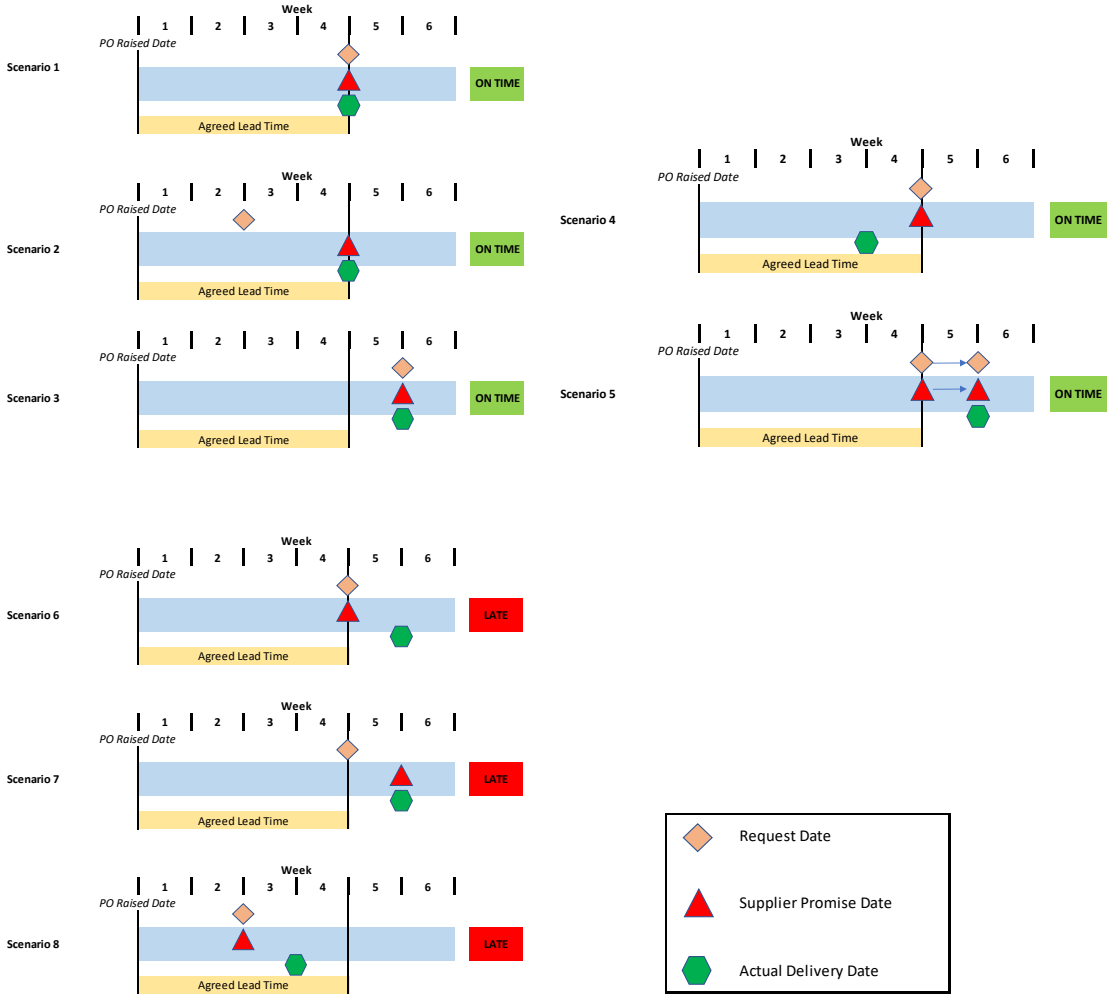
Definition - Supplier on Time in Full measures supplier performance in Purchase Order lines delivered on time and in full.

- SOTIF Calculation Formula

$$\frac{Number\ of\ Lines\ Delivered\ On\ Time\ In\ Full,\ in\ the\ period}{Number\ of\ Lines\ Delivered,\ in\ the\ period} \times 100$$

- The date of measurement is the Request Date (the date on which the order was raised plus the agreed lead time).
  - If the Request Date falls inside of the agreed lead time and the supplier is unable to agree to the reduced lead time, the delivery should not be judged as being late on the condition that the delivery is made no later than the agreed lead time.
  - Deliveries are classed as late if they are late by one day or more. There is zero tolerance on late deliveries
  - A delivery is classed as being in full if the delivery quantity is within 10% of that requested on the order line or the site has chosen to accept the order as being complete.

The following are scenarios are examples of on time and late deliveries



For SOTIF Early deliveries will be counted as being on time however a separate KPI's will be available to measure early deliveries

The Delivery Window for early deliveries is :

Domestic supplier: On-Time delivery window of 5 working days early.

Intercontinental supplier: On-Time delivery window of 10 working days early.

Supplier Parts Per Million Reject Rate (SPPM)

Definition - Supplier Parts per Million measures the quality performance of the supplier.

Method of Calculation: (Number of Rejected Parts / Quantity Received) in a period * 1000000

Number of Rejected Parts = Scrap + Rework + Quality Rejects

The following are PPM assignable:

- *Production parts which do not meet drawing specifications, functional or appearance standards*
- *Out-of-spec parts that require rework or repair for use in production at IMI Precision Engineering*
- *Production parts damaged from inadequate packaging or transportation for which the supplier is responsible*
- *Any defects outside of the boundaries defined by a deviation request*
- *Shipments that are received with mixed parts or parts that are the wrong revision level after a clean point has been established; PPM is assigned for the quantity of incorrect parts only*

The following are NOT PPM assignable:

- *Parts that meet all drawing specifications and/or boundary sample requirements but are not useable.*
- *Parts that are prior to the start of production and have not been released and approved by IMI Precision Engineering for production (e.g.launch parts, samples, pre-production parts)*
- *Production parts which do not meet specifications and/or standards but have previously approved deviations.*
- *Parts received with a delivery related Issue: part information errors, delivery errors, and quantity errors*

The above rules apply to all rejections but in the case of batch rejection then the following is also applied:

- *When a batch is rejected based on a sample inspection, the quantity applied to SPPM is dependent on the supplier's response. If the supplier urgently responds and sorts or replaces the product, only the initial confirmed rejects will apply to SPPM. However, if IMI is required to apply significant resources and sort or return the entire lot, then the entire batch quantity will be applied to SPPM.*

6a Supplier Performance Escalation

IMI Precision Engineering adopts a Supplier Management Review process (SMR) for the escalation of supplier's issues affecting IMI Precision Engineering if normal controls are failing to achieve acceptable performance. This involves both IMI Precision Engineering and the supplier at various management levels.

The process involves multiple stages of escalation which can ultimately result in exiting a supplier if improvement and alignment of targets is not achieved.

6b Performance Measurement Accuracy

The supplier performance measurement, which will be disclosed by IMI Precision Engineering within the periodic scorecard, draws heavily on data acquired through IMI Precision Engineering operations systems. As with any system, it may not reflect 100% accuracy. Supplier feedback is expected and encouraged to help IMI Precision Engineering identify ways to improve its supplier performance measurement system.

7. Cost of Poor Quality

IMI Precision may share associated costs incurred due to the supplier's failure to meet IMI Precision Engineering's quality and delivery requirements. Below is a list of typical events or examples that may be considered as associated costs:

Receiving Process:

- *Sorting*
- *Rework*
- *Line disruption*
- *Premium freight*
- *Cost of increased inspection*
- *Late delivery*
- *Excess inventory*
- *Misidentified parts*
- *Shipping documentation errors*
- *Deviation Report (RIS-A, IP-B, TP-A, DMR, CAR etc. Administration fee)**

In-Process Fallout:

- *Downtime*
- *Overtime*
- *Line speed reduction*
- *Additional manpower*
- *Line changes due to material availability*
- *Equipment breakage*
- *Associated material losses*
- *Outside processing required*
- *Premium product cost paid to support production*
- *Rework-labor, tooling and fixturing*

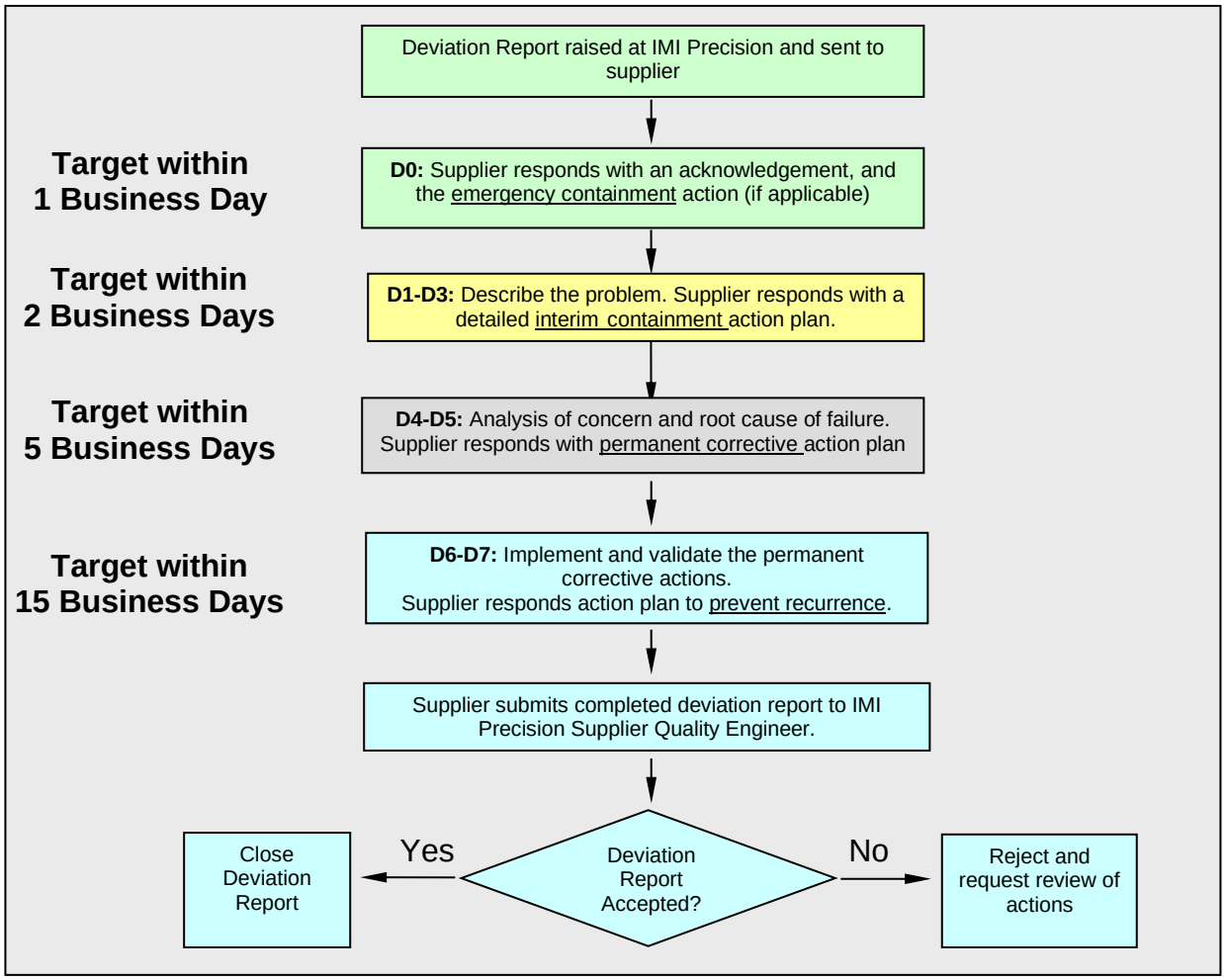
Customer Issues:

- *Rework at customer premises, travel, manpower*
- *Replacement of material at customer*
- *Premium freight*
- *Reimbursement of all charges from customer*
- *Costs of internal containment actions*
- *Added inspection, certification or product etc.*
- *Warranty costs*

NOTE: *A Non-conformance administrative fee may be charged. The expected payment frame for cost retrieval is 90 day

8. Corrective Action Request

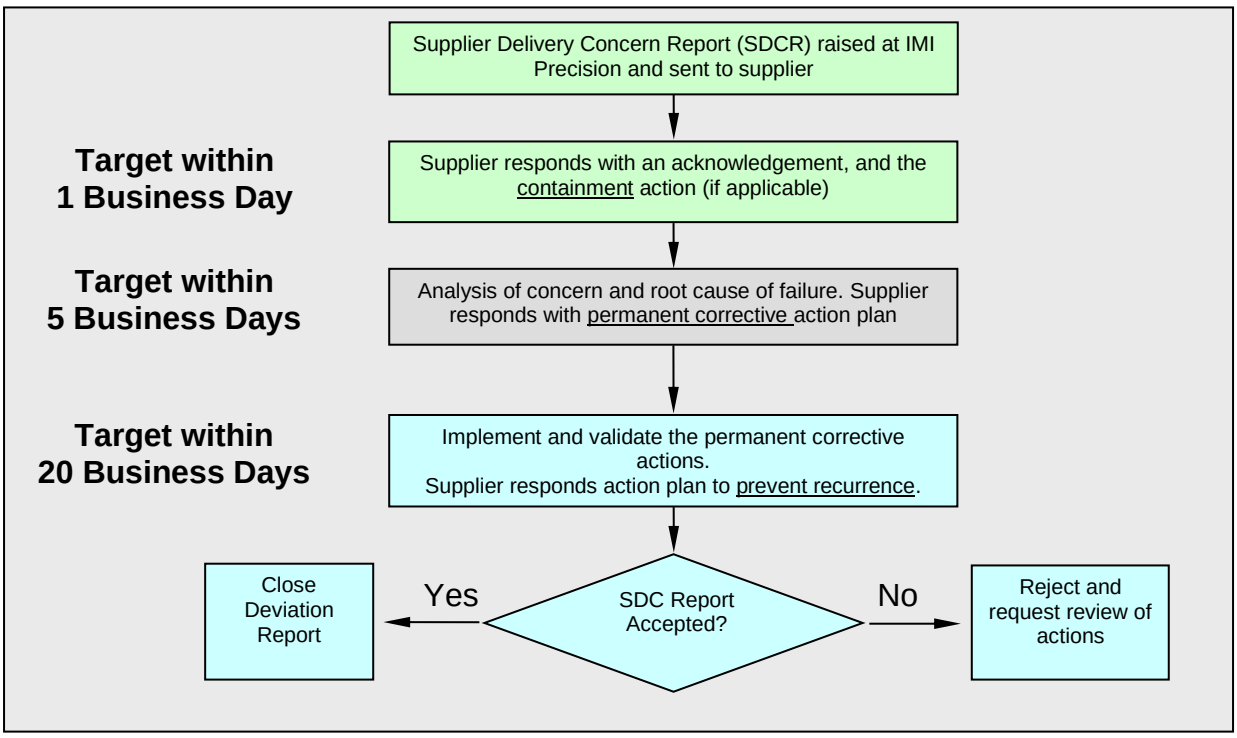
The Deviation Report Overview Flowchart (Fig 1) shows the key steps for the completion of a supplier Corrective Action Request. The actual steps and completion times should be agreed upon with the IMI Precision representative.



Deviation Report Overview Flowchart
Fig 1

9. Supplier Delivery Concerns

If a supplier delivers parts or goods to IMI Precision either early or late then IMI may request the supplier to complete root cause analysis and containment actions to protect both IMI and its customer. The communication of this will be completed using a Supplier Delivery Concern Report (SDCR) or an equivalent form requested by IMI Precision Engineering



10. Supplier Deviation Request

In the event the supplier discovers or suspects the shipment of non-conforming material, the supplier shall notify IMI Precision Engineering of the potential of receiving suspect material and submitting a Deviation Request to the affected IMI Precision Engineering site(s). The notification must include a detailed description of the suspect/non-conforming condition as well as information concerning the number of suspect parts, date codes, lot numbers and any unique identifiers of the suspect units.

No material subject to a Deviation Authorisation can be shipped to IMI Precision Engineering until the form has been formally approved. The supplier may be subject to corrective action measures and handling fees associated with the unauthorized shipment of non-conforming material. All shipments of material shipped under a deviation shall be marked with the Deviation Authorisation number on the label or attached in such a way that it is clearly visible and must consist of 100% affected material. A note shall be added to the packing slip stating the Deviation Authorisation number.

11. Material Age

General Requirements

It is IMI Precision Engineering's expectation that all material be compliant with the purchase order, drawing, revision levels, and has a manufacturing date code as recent as First In – First Out (FIFO) or corrective actions measures will allow.

Date Sensitive Material

Date sensitive material must have at least 25% of its shelf life remaining for acceptance (unless otherwise specified).

12. Certification Requirements

When a Material Certification or Certificate of Compliance (C of C) is specified either in the purchase order or in the applicable specifications/drawings, the supplier shall provide a valid certificate with each shipment certifying that the material meets all contract requirements. Acceptance of material based on a supplier certificate, does not exclude IMI Precision Engineering from subsequent rejection due to any non-conforming attribute or characteristic. Results of tests must be actual data that represents the lot of material shipped. Failure to supply the certificate when required is potential grounds for rejection of the shipment.

To be considered valid, a Material or Certificate of Compliance shall include as a minimum:

- *Lot number and/or date code*
- *Date of shipment*
- *IMI Precision Engineering PO number*
- *Quantity shipped*
- *IMI Precision Engineering part number specified*
- *Statement certifying compliance to contract requirement*
- *Supplier's authorized signature, certifying compliance to requirements*
- *Indication of material compliance (material certification only)*

13. Regulations Compliance and Declaration

IMI Precision Engineering expects suppliers to support and demonstrate product compliance with applicable environmental regulations such as but not limited to the following listed below. If these are superseded then use the latest reversion:

- *European Directive 2011/65/EC, on Restriction of Hazardous Substances (RoHS), as amended by Commission Delegated Directive (EU) 2015/863 (RoHS) (Mandatory)*
- *European Regulation (EC) 1907/2006, on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as amended, including the Candidate List of SVHCs, the Authorisation List (Annex XIV) and the Restrictions (Annex XVII) (Where applicable)*
- *European Directive 2000/53/EC, on End-of Life Vehicle (ELV), as amended (Where applicable)*
- *EICC and GeSI concerning CFSI (Conflict-Free Sourcing Initiative – 3TG) (Mandatory)*

When requested by an IMI Precision Engineering representative, a declaration letter must be submitted specifying that the part(s) submitted to IMI Precision Engineering are, and will remain, compliant with the indicated norms. Compliance Declaration Letter form is available through the IMI Precision Engineering Buyer.

It is the supplier's responsibility to perform documented due diligence establishing that the materials incorporated into the product(s) have been confirmed as compliant with RoHS, REACH, ELV and/or other requested regulations upon receipt of the materials at its facility and subsequent processing. Supplier must enter data into the IMDS System as requested.

14. Supplier Manufacturing Changes

General Requirements

Under conditions whereby IMI Precision Engineering owns design authority:

No change shall be made without the written approval of IMI Precision Engineering prior to implementation of the change.

Changes that require IMI Precision Engineering notification shall be communicated with the use of a Supplier Change Request Form. As a rule, the guidelines listed in the AIAG PPAP Manual Section 3 ‘Customer Notification and Submission Requirements’ are followed. Approvals are required for, but not limited to, the change types listed below:

- *Design changes*
- *Process changes that impact the documented Process Flow or Control Plan*
- *Reduction or change of product testing, as documented in the Control Plan*
- *(Additional supplier self-imposed testing is exempt)*
- *Production line machine changes to non-approved equipment*
- *Manufacturing location changes or tooling transfers*
- *Production from new, replacement, or modified tools or tools inactive greater than 1 year*
- *Constituent material changes, unless already approved for production for components*

If the supplier is uncertain about the potential impact of a change, the default condition would be to contact an IMI Precision Engineering representative. The supplier shall be liable for costs associated with unapproved changes and shipments.

Under conditions whereby the supplier owns design authority:

The Supplier may make minor changes to its products, provided that such changes are communicated well in advance to IMI Precision Engineering and after full internal validation. Should IMI Precision Engineering object to a change, supplier undertakes to work together with IMI Precision Engineering to find a solution.

All functional changes require IMI Precision Engineering approval. These shall be communicated with the use of a Supplier Change Request Form. No change shall be made without the written approval of IMI Precision Engineering prior to implementation of the change.

Supplier will always maintain a level III Production Part Approval Process (PPAP) warrant.

15. Tooling Management

Management of IMI Precision Engineering Owned and IMI Precision Engineering Customer Owned Tooling.

General Requirements

Where tooling is in place at the supplier, the guidelines outlined in the IMI Precision Engineering Loan Tool Agreement shall be followed. Periodic reviews of tooling status will be requested from IMI Precision Engineering.

16. Packaging, Labelling and Handling

General Requirements

In-process and finished product shall be appropriately packaged to protect it from damage. All suppliers providing packaging shall meet applicable shipping laws, codes and regulations, and must be qualified to International Safe Transit Association (ISTA) test standards as appropriate.

The use of returnable containers will be reviewed on a case by case basis. When returnable packaging is to be utilized, the supplier is to ensure that it is clean and free from dirt, debris, foreign materials and damage, prior to utilization for a shipment to IMI Precisions Engineering. It is expected that IMI will return this packaging in good condition allowing for normal controls. Returnable packaging that is not clean and free from dirt, debris, foreign materials or damaged, may be grounds for rejection of the material lot.

Each box/container in the shipment shall be marked with the following information as noted below, unless otherwise stated:

- *IMI Precision Engineering part number*
- *Manufacturing date, code/lot number*
- *Engineering: change/revision level (preferred)*
- *Quantity*
- *Number of boxes (in shipment) (preferred)*
- *Material shelf life expiration date (if applicable)*

Packing labels shall be attached to the carton exterior in shipping envelopes and must be marked with the following information, unless otherwise stated:

- *IMI Precision Engineering PO number*
- *IMI Precision Engineering part number*
- *Manufacturer part number (optional)*
- *Manufacturer name*
- *Manufacture date, code/lot number*
- *Engineering change/revision level (preferred)*
- *Quantity*
- *Number of boxes (in shipment) (preferred)*
- *Material shelf life expiration date (if applicable) (preferred)*

Special Labelling of Shipments

The initial shipment of product shipped under an approved PPAP, or deviation must be labelled as such. Product shipped after sorting or rework by the supplier shall be labelled as such. The label shall state sorting or rework preformed, date preformed, and reference to the IMI Precision Engineering NCR number (when applicable).

Electro Static Discharge (ESD) Requirements

ESD packaging and labelling shall be used for all static sensitive products per industrial standards (reference ESD Association S20.20 or IEC 61340-5-1). Suppliers of static sensitive components shall incorporate suitable measures, including protected areas, handling, and packaging requirements, to ensure that components are not damaged due to ESD events prior to arrival at an IMI Precision Engineering facility.

17. Supplier Assessment Survey and Source Inspection

Supplier Assessment Survey (s)

Upon reasonable prior written notice, a Supplier Assessment Survey or a Supplier Process Sign Off may be conducted by IMI Precision Engineering representatives, at the supplier's manufacturing location during normal business hours. The purpose of the audit is to verify that the supplier has the manufacturing and supporting processes appropriate to produce a component that can meet both current and future needs in terms of quality, cost and delivery requirements.

Additional audits such as process, product audits or Continuous Quality Improvement (CQI) audit may be conducted by IMI Precision Engineering representatives and/or IMI Precision Engineering's customer representatives at the supplier's manufacturing location with sufficient notice. Corrective Action Requests may be generated as a result of any audit activity.

Occasionally IMI will request supplier self-assessments for various audits, surveys or sign off's to be completed meeting either IMI or customer requirement

Source Inspection

IMI Precision Engineering reserves the right to verify at the Supplier's premises that the product conforms to all specified requirements. IMI Precision Engineering also reserves the right to allow its customers' representatives to verify at the Supplier's premises that the product conforms to all specified requirements.

18. Advanced Product Quality Planning (APQP)

Advanced Production Quality Planning is paramount to achieving a successful product launch, and in setting the foundations for ongoing process control and continual improvement. IMI Precision Engineering and supplier will use the Product Approval Workbook to assure effective communication and launch.

18a Production Part Approval Process

The Production Part Approval Process ensures the supplier understands IMI Precision Engineering and end customer-specific requirements. The supplier will provide evidence that they have the potential to produce the product, which consistently meets requirements, at the quoted production rate. The Data submission requirements are documented in the Supplier Statement of Work.

Where applicable, IMI Precision Engineering and/or its customer may require the rights to verify purchased product at the supplier's premises.

18b Product Approval Submission Format

The Product Approval documentation and signed sample parts shall be maintained through the production life of the product. All documentation submitted for approval will be in the format identified in the latest issue of the following manuals as approved by the AIAG, unless otherwise stated.

18c Product Approval Submission Requirement

Product Approval Submission may be required for the following reasons:

- *Initial submission*
- *Engineering change(s)*
- *Tooling: transfer, replacement, refurbishment, or additional*
- *Correction of discrepancy*
- *Tooling Inactive > than 1 Year*
- *Change to optional construction or material*
- *Sub-supplier or material source change*
- *Change in part processing*
- *Parts produced at additional location*