Paragraph	Table of Contents	Page

REVISION RECORD

Detailed Description of Change(s)	Rev	Date	Originator
Initial release after change to new document numbering system.	1	03/13/2016	Greg Prong
Note added in section 11 to be advised that PR is required to submit significant non-conformances to the AAR for AAR certified commodities.	2	8/26/2016	Eddie Bheda
Quality system requirements updated to modify the AAR related details. Updated 'EMD' to say 'PR' (Progress Rail).	3	1/17/2017	Eddie Bheda
Updated the company logo to Progress Rail (PR) and updated the template	4	1/20/2017	Eddie Bheda
Updated section 2 with the English documents requirements.	5	7/7/2020	Aditya Bheda
Changed SPAP to PPAP	6	9/11/2020	Aditya Bheda
Minor wording changes related to employee health and safety in section 4.0, Onsite assessments.	7	8/15/2022	Greg Prong
Minor wording changes related to health and safety & environmental performance in section 4, PPAP, page 4. Minor wording change in section 6, Employee Training related to safely performing work to yield a quality product. Renumbered Table of Contents.	8	8/15/2022	Greg Prong

1.0 Scope

The purpose of this document is to define the general supplier quality requirements necessary to ensure the quality of parts and services purchased by Progress Rail (PR). PR requires its suppliers to appropriately plan and control the quality of material shipped or services provided to any of our business units to ensure reliable on-time supply of conforming material.

The information in this manual applies to all direct production or service material suppliers to PR. The following pages specify the supplier quality requirements which are in addition to all engineering requirements related to the purchased product or service and any commercial or other requirements specified or referenced on the PR purchase order.

2.0 Quality System Requirements

Quality System

PR requires that each supplier maintain an effective quality management system. ISO-9001 certification is highly recommended. Suppliers that provide parts listed in the AAR manual that require certification, must hold AAR certification for that commodity. The list of these commodities can be found in 'AAR M1003 section J Appendix A'. In addition, the supplier must meet all other requirements of this manual as well as any additional requirements stated on the Purchase Order or PR provided drawings.

Quality Manual & Supporting Quality System Procedures

Upon request, the supplier must furnish PR with a controlled copy of the supplier's Quality Manual and supporting procedures.

All documentation submitted must be submitted in English. Documents with dual languages are acceptable, but English needs to be included.

3.0 Supplier Control of Sub-tier Suppliers

The supplier is responsible for the quality of materials and components provided to them by their sub-tier suppliers and subcontractors.

When the sub-tier supplier is an essential component of the supply-chain process, PR reserves the right to execute the following:

- Specify the sub-tier suppliers that may be used.
- Evaluate and certify the sub-tier supplier's facilities.
- Assists the supplier in controlling the sub-tier supplier.

PR reserves the right to evaluate the quality system and records of such sub-tier suppliers as necessary. PR's involvement does not absolve the supplier of the ultimate responsibility for its sub-tier supplier's quality performance.

4.0 Supplier Selection and Approval

PR has a supplier selection process that outlines various steps to be taken to bring a part or supplier into PR. PR may request that a Supplier Questionnaire and On-site Supplier Evaluation be completed by the supplier. See the Progress Rail website's Supply Chain Management web page to obtain a copy of that evaluation form.

On-Site Assessment (If Required):

An on-site assessment of the supplier's facility may be requested by PR. These on-site assessments may include one or more of the following elements:

- Quality System audit - determines whether the supplier's quality system is in place and functioning effectively and includes documented processes for driving continuous improvements in employee health and safety, product quality, delivery and cost.
- Business assessment - determines whether the supplier has the needed financial resources, production capacity, and other business resources needed to fulfill PR volume production needs and continuity of supply.
- Manufacturing & technology assessment - determines whether the supplier has the necessary manufacturing processes, controls, and technological capabilities to ensure on time delivery and prevent the shipment of non-conforming product to PR.

Production Part Approval Process (PPAP)

PR uses the Production Part Approval process (PPAP) to document a supplier's compliance to PR specifications and requirements as a control method to verify that suppliers have the capability to meet those requirements.

The PPAP requirement is applicable to production and service parts and raw material purchased by PR and is applied against the part number that appears on the associated PO.

The process is also applicable to suppliers of production tooling for PR's facilities. Such tooling PPAPs will be submitted by the respective supplier and dispositioned by applicable PR plant personnel.

NOTE: Suppliers are not permitted to ship production or service material unless they have received "full" or "interim" PPAP approval. Full approval will not be granted until all required documentation has been submitted.

Full or interim PPAP approval is formally indicated within PR's ETQ PPAP database.
- A full PPAP approval will have an PPAP record at the "Approved" phase.
- An interim approval will have an PPAP record at the "Interim Approval at Supplier" phase.

If you have any questions about the PPAP approval status of your part, consult your Buyer or Supplier Quality Engineer.

PR's expectation is that PPAP and related activities such as quality planning and other prevention methods are part of the supplier's normal operating procedures. The supplier must execute these activities to support successful PPAP and ongoing production, environmental, health and safety, quality, and delivery performance.

For specific details of the procedural and submission requirements for PPAP, refer to PR document JA-COR-0001

5.0 Manufacturing Control

General Process Control

PR suppliers are required to control all manufacturing processes in accordance with the supplier's control plan or equivalent document.

Statistical Process Control

The supplier is required to apply effective statistical process controls for designated special characteristics. Such controls shall be defined in the process control plan or equivalent document.

Effective controls typically include application of an appropriate statistical process control chart or other statistical method(s).

Additionally, the supplier must develop documented procedures for reacting to out of control conditions. Such reaction procedures must include:

- Containment of material back to the last acceptable inspection point, at a minimum, including any material that may have been shipped from the supplier's facility.
- Application of corrective actions against the root cause(s) as specified in the "Corrective Action" section of this document.

Process Performance

The following process performance requirements apply to special characteristics that are designated on PR drawings or through a joint review between the supplier and PR / Progress Rail:

- A **C_{pk} of at least 1.33 or higher** is required.
  If this requirement is not met, then 100% inspection is required for those special characteristics not meeting the requirement until such time as:
  - The manufacturing process is changed to obtain the necessary statistical performance, and
  - The process performance is validated through a subsequent process performance study.

Records must be maintained of ongoing C_{pk} evaluation and review and appropriate reaction plans where minimum process performance is not met.

Where other statistical methods for process performance are approved by PR, consult with your assigned Supplier Quality Engineer to establish the minimum targets for process performance (in lieu of the Cpk statistic).

Records of the supplier's process performance monitoring and reactions to non-conformance shall be provided to PR upon request.

Process Improvement

The supplier is expected to review their manufacturing processes and business operations on a defined periodic basis and maintain records of their efforts to improve the effectiveness and efficiency of their processes to improve product quality, delivery and cost.

PR reserves the right to review records of such process improvement activities.

6.0 Employee Training:

The supplier must have a documented procedure that is adhered to for employee training that includes the following:

- Defined requirements for education, skills, training and experience necessary to safely perform the work to yield a quality product
- Provision of the necessary training to ensure these requirements are met
- Evaluation of the effectiveness of training
- Maintenance of training records

7.0 Product Design & Revision Control

For PR Controlled Product Designs

The supplier shall have a documented procedure for assuring that the latest PR drawings are available and implemented at their facility or sub-supplier(s) in accordance with PO and PPAP requirements.

The supplier shall have a written procedure that defines the methods for:

- Receipt, review, distribution, and implementation of all changes to drawings and specifications
- Control of new or revised parts until approved by PR
- Control and elimination of obsolete drawings, specifications and production material as appropriate

For Supplier Controlled Product Designs

For suppliers that have design control over products they supply to PR, the following requirements apply:

- Unless otherwise agreed to, the supplier shall notify PR Engineering and their assigned Purchasing Agent of any planned design changes and jointly establish a product design validation plan with PR Engineering, and where applicable, submission of the necessary changed engineering drawings or specifications.
- PPAP requirements typically apply relative to design validation. Refer to the "Production Part Approval Process (PPAP)" section of this document for more details on the PPAP approval process.

8.0 Supplier Manufacturing Process Changes

The supplier shall have documented processes and procedures in place to control changes to their manufacturing process.

The supplier shall provide advanced notice of any such planned changes to their assigned PR Supplier Quality Engineer and PR Purchasing Agent to obtain direction on PR PPAP approval.

Refer to the "Production Part Approval Process (PPAP)" section of this document for more details on the PPAP approval process.

9.0 Supplier Request for Deviation

A supplier is never permitted to knowingly ship product that does not conform to specifications without prior written authorization from PR. If such a condition exists, the supplier must petition the PR SQE or purchasing agent by submitting a completed deviation request using PR's online ETQ Deviation system.

PR will provide a disposition to the request for deviation. If approved, the supplier is then authorized to ship product in compliance with any specified conditions on the deviation.

By definition, deviations are considered temporary approvals only and must not be misconstrued as a permanent engineering change. The supplier must work immediately to correct the non-conformance(s). Failure to comply with the conditions of the deviation may result in the issuance of a formal Quality Notice (QN), and / or cost recovery actions, all of which may affect the a supplier's performance rating.

You may request permanent design change from your assigned Product Engineer.

10.0 Packaging & Labeling

The supplier is responsible for designing packaging that protects the products from transportation and environmental damage.

Please refer to the PR Supplier Packaging and Shipping Manual for specific requirements.

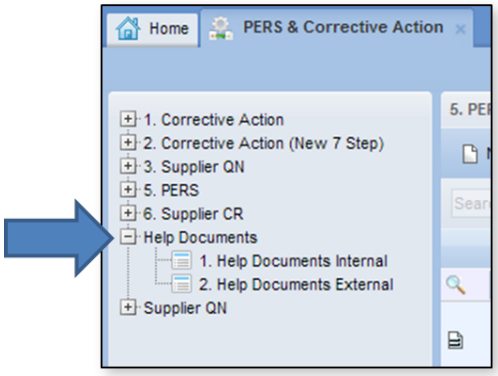
11.0 Corrective Action

The supplier shall establish a documented procedure for problem solving to identify and eliminate root cause(s) of non-conformances to PR requirements.

Supplier corrective action reporting is handled through PR's on-line ETQ Quality notice (QN) system.

Contact your assigned Supplier Quality Engineer or assigned PR Buyer if you need assistance with logging into the ETQ QN system.

Training materials can be found on the use of the ETQ Quality Notice system within the system itself. In the left hand view selector, look for the "Help Documents" entry. Click the "Help Documents External" view to see a list of help documents that will support your root cause analysis and corrective actions activities.



Click on the document you want to download / view.

Suppliers are expected to respond to ETQ QNs with the following response performance expectations:

- **Containment** : within 5 days
- **Permanent Corrective Action** : within 25 days

As part of their corrective action activities, suppliers must establish root causes for:

- The occurrence of the nonconformity ("occurrence" causes)
- The failure to detect the non-conformity and stop its delivery to PR / Progress Rail ("detection" causes), and
- The failure to prevent the non-conformance as part of the initial manufacturing design planning or Advanced Product Quality Planning (APQP) activities ("prevention" causes).

Permanent corrective actions focused on eliminating the established root causes for occurrence, detection and prevention must be planned and implemented, and documented in the ETQ QN response system.

Once implemented, the effectiveness of those corrective actions must be assessed and documented in the ETQ QN response system.

Be advised that PR is required to submit significant non-conformances to the AAR for AAR certified commodities.

12.0 Non-Conformance Related Cost Recovery:

PR may elect to recover, from the supplier, excess costs associated with non-conformance events.

It is therefore beneficial for the supplier to contain non-conformities and effectively correct the process in a timely manner to minimize cost impact.

13.0 Controlled Shipping

General

Controlled Shipping is a heightened quality containment status in which PR requires the supplier to execute a redundant inspection process to sort for and contain specific nonconformance(s), while implementing root cause analysis and permanent corrective action.

There are 2 level of Controlled Shipping status:

- Controlled Shipping Level 1 (CS1)
- Controlled Shipping Level 2 (CS2)

Controlled Shipping Level 1:

For CS1, the supplier must perform 100% redundant inspection against an PR approved list of non-conformances with the objective to prevent delivery of any non-conformances to any affected PR / Progress Rail operations.

All costs associated with the CS1 activities will be borne by the supplier.

Qualified 3rd party Inspectors/Auditors are not required with CS1 but may be deployed by the supplier if they deem it necessary to achieve effective containment of non-conformances.

CS1 activities shall continue until such time as the supplier has effectively established root causes and implemented effective corrective actions as per the "Corrective Action" section of this document for each of the defects on the list of non-conformances.

PR will establish specific exit criteria for the CS1 event on a case by case basis.

PR must explicitly approve the closure of the CS1 activity in writing.

Note: PR closure of the associated Quality Notices does not constitute explicit approval to close the CS1 activity. The supplier must receive explicit written notification from PR that the CS1 activity is closed.

Controlled Shipping Level 2:

If CS1 containment activities are deemed by PR to be ineffective at preventing the delivery of non-conformances to all affected PR locations, then PR may initiate a CS2 status against the supplier.

For CS2, a third party resource will be required to perform an additional 100% redundant inspection inclusive of the CS1 inspection (i.e. in addition to CS1) against the approved PR list of non-conformances.

The objective of this activity is to prevent delivery of any non-conformances to any affected PR / Progress Rail operations.

All costs associated with CS2 activities will be borne by the supplier.

CS2 activities shall continue until such time as the supplier has effectively established root causes and implemented effective corrective actions as per the "Corrective Action" section of this document for each of the defects on the list of non-conformances.

PR will establish specific exit criteria for the CS2 event on a case by case basis.

PR must explicitly approve the closure of the CS2 activity in writing.

Note: PR closure of the associated Quality Notices does not constitute explicit approval to close the CS2 activity. The supplier must receive explicit written notification from PR that the CS2 activity is closed.

When CS2 is considered closed, the containment reverts back to CS1 status and the supplier must still fulfill the exit criteria for CS1.

14.0 Supplier Performance Monitoring

PR periodically monitors its supplier's performance to ensure they continue to meet minimum performance requirements.

This monitoring may consist of one or more of the following

- On-site audits of the supplier's quality system, manufactured product and/or production and service processes.
- Review of suppliers PPAP submission packages, as requested.
- PR receiving inspection records.
- Random review of the supplier's inspection record(s)
- Supplier's performance rating / scorecard.
    - For more information on the supplier performance scorecard, refer to the PR & PRM Supplier Scorecard Report document on the Progress Rail website.

If the supplier performance is deemed sub-standard, then PR may take corrective measures that may include, but are not limited to:

- Assignment of CS1 or CS2 containment status against the supplier
- Initiation of quality review meeting(s) with the supplier to allow the supplier's Management team to present their systemic corrective actions to appropriate PR representatives from :

- Affected PR operations locations
- PR Engineering
- PR Purchasing
- PR Management
- PR Executive Leadership

The supplier will be required to maintain a list of the resulting action items, including assigned responsibilities and target completion dates, and periodically report the status of those action items in a manner prescribed by PR at the time.