



Achieving
Supplier
Quality
Excellence

Approval(s): Supplier Quality Manager Jeremy Billerbeck	Standard. No.: NA-ST-050
	Revision No.: 12
	Effective Date: 10/29/18
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INTRODUCTION / PURPOSE

Tower International produces the largest array of structural products in the industry. We are the world's leading supplier of full frames and the leading supplier in North America of engine cradles and control arms. We are also committed to product leadership in modular vehicle structures, including body, chassis and suspension modules.

You can view our worldwide locations by referencing the Tower International web page at <http://www.towerInternational.com>. Future growth leading to additional locations is projected through both acquisition and internal sales expansion.

It is the intention of Tower International to define quality expectations that will apply to all Tower International suppliers. Future changes to this manual will be communicated to the supplier with ample time allowed for implementation where necessary.

Clarifications:

- IATF 16949:2016 edition defines a supplier as one who supplies goods or services directly to an organization that supplies directly to Fiat Chrysler Automotive, Ford, General Motors, or other customers subscribing to these requirements. In this manual we will refer to these suppliers as suppliers to Tower International.

The Tower International Technical Center is responsible for initial supplier contacts, component quoting, prototypes and purchase orders. A Tower International Business Unit is defined as a specific manufacturing location and is responsible for supplier releases and ongoing supplier quality.

SCOPE

The requirements contained within this manual supplement the requirements found in IATF 16949:2016 and apply to all suppliers of raw materials, component parts, assemblies, outside processing and services provided to any facility belonging to Tower International. All material shall be processed, controlled, inspected, and tested in accordance with IATF 16949:2016 and the Tower International specific requirements

REVISION / CHANGE(S)

Updated Section 10 *Safe Packaging, Labeling and Shipping of Steel and Aluminum Coils* to specify the I.D. Mandrel lip must be located within the lower half of the coil I.D., between the 4 and 8 o'clock position.

Updated TS 16949 references to IATF 16949

Added Safe Launch Information

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REFERENCED DOCUMENTS

NA-ST-050A Supplier Initiated Engineering Change Approval Request (SIECAR)

NA-ST-050C Supplier Quality Assessment

SUPPLIER EXPECTATIONS

Clear communication of expectations and requirements is a critical element in any supplier – customer relationship. The Tower International supplement to the IATF 16949:2016 Quality Management System Requirements, titled "Achieving Supplier Quality Excellence", conveys Tower International's quality expectations and provides a foundation upon which we (the supplier and Tower International) can build the trust and teamwork necessary to ensure our long term mutual survival. Our performance expectations are:

- All suppliers are required to meet IATF 16949:2016 Quality Management System requirements. At a minimum, suppliers must be certified to ISO 9001:2015 by an accredited third-party certification body.
 - 1) Suppliers who provide goods and services to OEM Automotive customers as well as to Tower International must conform to the requirement with regards to third party registration and meet all registration timing as defined by the OEM's.
 - 2) Those suppliers who do not supply the OEM's directly must demonstrate conformance to IATF 16949:2016 by passing an audit conducted by a second or third party as determined by Tower International. Assessment by an OEM or OEM approved second party is recognized as meeting the supplier compliance requirements. Registration is not required, but provisions must be made for routine follow up audits to insure continual compliance.
 - 3) The supplier must assume full responsibility for the quality of their products and services; Tower International can only assist the supplier in meeting this responsibility.
- Suppliers who perform heat-treat or supply product to Tower International that is heat-treated, and is critical to the quality of the product Tower provides to its customers, must meet all requirements in the CQI-9 AIAG Standard. This provision is to satisfy Tower's customer requirements and may be waved at the OEM's discretion but not Tower International's without the express permission from the customer through omission in the customer specific requirements or by written

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approval. Suppliers are responsible for providing the information required by CQI-9 for review by Tower International.

- Suppliers who perform plating or supply product to Tower International that is plated, and is critical to the quality of the product Tower provides to its customers, must meet all requirements in the CQI-11 AIAG Standard. This provision is to satisfy Tower's customer requirements and may be waived at the OEM's discretion but not Tower International's without the express permission from the customer through omission in the customer specific requirements or by written approval. Suppliers are responsible for providing the information required by CQI-11 for review by Tower International.
- Suppliers who perform coating or supply product to Tower International that is coated, and is critical to the quality of the product Tower provides to its customers, must meet all requirements in the CQI-12 AIAG Standard. This provision is to satisfy Tower's customer requirements and may be waived at the OEM's discretion but not Tower International's without the express permission from the customer through omission in the customer specific requirements or by written approval. Suppliers are responsible for providing the information required by CQI-12 for review by Tower International.
- All suppliers must meet 100% on time delivery on all supplied products and services.
- Supplier errors in quality or delivery resulting in line disruptions to either Tower International or any of our customers will result in cost recovery by Tower International.
- All suppliers must conform to the Tower International specific requirements found in this manual.
- Suppliers whose performance rating falls below 85% for an individual Business Unit may be removed from the Approved Supplier List and placed on probation (see 11.0). The rating system, as well as the effects of probation, will be covered in detail elsewhere in this manual.

Example:

90 - 100%	Green
71-89%	Yellow
< 70%	Red

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STANDARD

Supplier Quality Requirements

1.0 Advanced Product Quality Planning

- 1.1 The supplier is required to conduct documented Advanced Product Quality Planning (APQP) activities on all new products and major re-designs of existing products. The guide to be used in this process is the "Supplier APQP process" (NA-ST-054), standard published by Tower International and any and all associated customer specific requirements.
- 1.2 Tower International personnel to insure that the appropriate planning activities are taking place will evaluate the supplier's APQP activities at each gate during the process.

NOTE: *All of the Tower International facilities and all suppliers shall be required to maintain a controlled library of up-to-date revision levels of the AIAG manuals that will be reviewed on an annual basis.*

2.0 Use of Statistical Process Controls

- 2.1 Tower International expects all suppliers to be operating beyond the basic training and data gathering stages, and to be actively involved in statistically controlling processes. Alternate methods of control may be implemented once process capability and stability is proven. Tower International expects aggressive corrective action on processes shown to be incapable, unstable, or off target.
- 2.2 The standard reference manual for the use of statistical methods is the joint AIAG/ASQ manual "Statistical Process Control". The application of any statistical tool must comply with the requirements set forth in that manual.
- 2.3 Statistical process controls are mandatory for those process parameters and product characteristics that are designated as significant characteristics on either Tower International or customer supplied drawings and/or other media. Once the significant characteristics are determined, the supplier shall develop and retain appropriate statistical evidence to show control and continual improvement over time. The individual Tower International Business Unit Quality Leader/Designee will determine the type of data required (Cp or Cpk) and the reporting frequency.

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3.0 Drawing and Engineering Change Control

- 3.1 It is the supplier's responsibility to produce materials that meet all engineering drawings and specifications supplied by either Tower International or our customers. In order to maintain these quality expectations, the supplier shall establish and maintain a system to assure that only the latest applicable drawings and specifications are used. It is the supplier's responsibility to periodically review and verify that the latest copies of all applicable drawings and specifications are available and fully understood by those personnel responsible for assuring compliance with the requirements. At a minimum this review shall be conducted on a yearly basis.
- 3.2 Supplier requests for new drawings and proposed changes will be documented by completing NA-ST-050A, Supplier Initiated Engineering Change Approval Request (SIECAR) and be sent to affected Tower International location. No change request is to be accepted or acted upon by the supplier unless the request is formally received in writing and is accompanied by the appropriate drawings and/or written specifications. If for any reason the availability of updated drawings is untimely, the supplier may proceed with the requested change if a marked, signed, and dated drawing is received. As the supplier is responsible for meeting all print requirements, any questions pertaining to the new requirements, such as unclear specifications, must be resolved prior accepting and implementing the change.

NOTE: Native CAD model is master.

4.0 Corrective Action Procedure

- 4.1 The supplier shall have a written corrective action procedure in place that responds to complaints received from any Tower International location. To assure timely resolution of nonconformance issues, the supplier shall apply appropriate problem-solving techniques to identify root causes and implement permanent corrections. In addition, the supplier shall use statistical methods where applicable to verify that the corrective action implemented has corrected the problem and the process continues to produce material that is within specifications and the process is in control. Documentation required to record corrective action taken on customer complaints and internal failures are to be completed as follows.

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4.2 When Tower International has discovered nonconforming material and supplier responsibility has been verified through proper analysis, contact will be made with the supplier. A Supplier Quality Report (QR) will be issued to the supplier to document pertinent problem information. The QR form is designed to document initial supplier actions to identify, contain, and isolate the problem, disposition of nonconforming material on hand; probable cause, and dates corrected shipments can be expected.

4.3 The supplier will be required to submit a corrective action report if so directed by the receiving location Quality Leader/Designee. This report will be prepared utilizing the Supplier Response section of the QR form. The initial response must be returned within the time frame (within 24-48 hours) specified by the issuing location. In completing this report the following steps must be included and completely documented, with all appropriate records maintained.

- Hold and inspect all material
- Investigate the problem and the quality system to determine probable cause
- Conduct investigations and experiments until the root cause of the problem is identified
- Implement appropriate process or system corrective action to eliminate the root cause of the problem
- Develop a measurement system to verify the continued effectiveness of the corrective action implemented.

5.0 Request for Temporary Deviation

5.1 In certain instances, material that does not conform to all specifications may be fit for use if the nature of the nonconformance will not impact the fit, function, or appearance of the final product. Suppliers may submit a request for approval to use such material by requesting a Temporary Deviation Authorization using NA-ST-050A, Supplier Initiated Engineering Change Authorization Request form (SIECAR) from the affected Tower International location. The supplier will complete the form and return it to the issuing location for approval. In all instances, a written corrective action plan must be prepared and attached to the request, describing steps taken to prevent a recurrence of the deviated condition.

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5.2 Pending approval of the formal deviation request, the supplier is responsible for segregating the nonconforming material to prevent accidental shipment. If the deviation is granted, the supplier must abide by the conditions and limitations specifically stated in the deviation. When the affected material is shipped to Tower International, it must be identified as changed or deviated material in a manner that is agreed upon by the Tower International issuing location prior to shipment. Deviated material and accompanying shipping documents must be positively identified with the deviation number prior to shipment from the supplier's facility.

5.3 At the time the deviation is requested the supplier must be made aware that it will be expected to pay any costs incurred by Tower International due to special processing, handling, or customer penalties caused by the use of material covered by any deviation.

IMPORTANT NOTE: All Sub-Suppliers are REQUIRED to collect data prior and after a change to assure change validation doesn't affect product. All Tower's Sub-Suppliers will resubmit a PSW after the implementation of the change. Tower's Plant Quality Manager and the Sub-Supplier will make the final determination on how many parts will be used for the collection of data.

6.0 Repair and Rework Procedures

6.1 Repair or rework to products within the supplier's plant have historically been shown to be a risk to quality; subsequently, any rework or repair operations being performed by the supplier requires the prior approval of Tower International Business Unit(s).

6.2 Rework. Defined as action taken on nonconforming product so that it will meet the specified requirements. The supplier must develop written rework procedures to correct any product nonconformities that occur during production, and submit them to the using Business Unit for approval. Each rework procedure should include specific instructions on the rework method proposed and the method of identification of reworked parts. If the supplier is currently supplying identical part numbers to another customer, and has previously obtained approved written rework procedures from them, copies must be submitted for review and concurrence prior to the first shipment of reworked parts to all Tower International using Business Units.

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- 6.3 Repair. Defined as action taken on nonconforming product so that the product will fulfill the intended usage although the product may not conform to the original requirements. The supplier must develop written repair procedures to correct any product nonconformities that occur during production and submit them through the receiving plant purchasing department for approval and conform to the requirements stated in Section 6.2 above. Before repaired parts can be shipped, the using Tower International Business Unit must grant a Temporary Deviation Authorization.
- 6.4 Under no circumstances shall the supplier rework or repair parts or material and ship them to any Tower International location without receiving prior written authorization from the receiving plant. Any parts shipped prior to obtaining the appropriate written approvals will be rejected and returned to the supplier at their expense. All costs incurred by Tower International due to processing parts that have been repaired or reworked without obtaining the proper authorization will be the responsibility of the supplier.

7.0 Production Part Approval

- 7.1 Production Part Approval is a vital part of the customer-supplier relationship and, as such, should not be jeopardized through poor communication. Meeting sample dates is critical to the successful completion of all projects, therefore, due dates must be realistic, achievable, and jointly established. Any anticipated changes or delays in the agreed upon sample due date must be communicated to the Tower International using location as soon as any potential problem is perceived by the supplier. No product is to be shipped unless PPAP approved by the Tower International using location.
- 7.2 Tower International will furnish the PPAP Requirements to each supplier upon award of contract on new parts. These requirements will either be a Customer format (ex: FCA PSO) or the Tower International format as defined in "TAPAS" (NA-ST-052). The PPAP documentation should be indexed and tabbed in the same sequence as the requirements on the checklist and put into a manual. The PPAP Requirements Checklist should then be included in the submission package and will serve as the table of contents for the PPAP Manual. The agreed upon PPAP date along with the signatures of the APQ Team will be stated on this cover sheet.

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- 7.3 The evaluation of production samples (PPAP) will be conducted in accordance with guidelines found in the joint AIAG/ASQ publication "Production Part Approval Process". Unless the supplier is specifically advised otherwise, the submission will conform to Level 3 requirements as defined on the Part Submission Warrant (CFG-1001). Evaluation of the samples will be at the supplier's location when required, with sample approval authority residing with Tower International. If the same part is to be used at multiple Tower International locations only one submission will be required. Sample submission must include completion of all required PPAP forms and requirements; a cross referenced marked drawing, and all properly identified layout samples. If conditions warrant, such as minor changes to existing parts, the decision may be made to have the supplier submit the samples and all appropriate documentation to the Tower International receiving location in lieu of an on-site visit. The on-site evaluation or the request to send parts to Tower International will be coordinated through the Tower International receiving location.
- 7.4 When the supplier has successfully completed all required inspections and tests and the results indicate that the samples conform to all specifications, the supplier's Quality Manager must notify Tower International of the supplier's readiness for sample submission and a firm date for evaluation established.
- 7.5 Sample approval is required whenever one or more of the following conditions occur:
- New tooling is made
 - Modifications are made to existing tooling
 - Existing tools are moved to a new manufacturing location
 - A significant change is made to the manufacturing process
 - A new sub-supplier or outside processor is introduced
 - A tool has been out of production for more than 12 months.
- 7.6 It will be the supplier's responsibility to notify the Tower International using location well in advance if any such changes are anticipated. Full compliance to all of the production part approval requirements may not be necessary based on the significance of the proposed change.

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- 7.7 All samples are to be manufactured using production tooling and processes and taken from a significant production run with the specific quantity to be agreed upon by Tower International Quality and Purchasing in advance. Typically the production run would be from one hour to one shift's production. When parts are produced from tooling containing duplicate fixtures or multiple cavity molds, dies, etc., dimensionally inspected parts from each must be submitted.
- 7.8 Missing submission dates, submitting samples that are found to be dimensionally incorrect, or having improper or incomplete documentation, are subject to rejection. The rejection of a sample, regardless of the reason, may result in the issuance of a QR against the supplier and may result in the supplier bearing the expense incurred to Tower International to perform the PPAP. This rejection, if issued, will be included in the calculation of the Supplier Quality Rating.
- 7.9 Once Production Part Approval has been granted, the supplier is required to maintain one of the completely laid-out parts as a master for future reference when requested by the Tower International receiving Business Unit. Tower International will retain an additional part for comparison purposes and to verify part attributes at the time of sample approval when deemed necessary by the Quality Leader/Designee.
- 7.10 All production parts will be compared to the master sample in terms of visual acceptance. Any deviation from the original master sample is unacceptable.
- 7.11 The properly completed Production Part Approval must include all documentation referenced in the Retention/Submission Requirements Table of the AIAG Production Part Approval Process Manual.

8.0 Shipment of New or Changed Material

Shipments of new or changed material will not be accepted until the Tower International receiving location has granted sample approval. Once approval is given, all initial shipments must be clearly identified in accordance with instructions obtained from the receiving plant Quality Leader/Designee.

- 8.1 When the supplier's first regularly scheduled production lot has been produced, inspected, tested, and released for shipment, the supplier must notify the receiving plant Quality Leader/Designee that the first production parts or parts containing the change are ready for shipment.

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9.0 Packaging and Labeling Instructions

- 9.1 The supplier's system must provide controls that will assure satisfactory protection against damage, contamination, and corrosion during manufacturing, storage, and shipment. The methods of cleaning, preserving, and packaging require the prior approval of Tower International, and written instructions to accomplish this must be provided by the supplier as part of the sample submission package. If material is to be kept in storage, provisions are to be made for periodic inspections to detect possible deterioration. It is the supplier's responsibility to notify Tower International if any changes to the packaging system are anticipated, as Tower International must approve all changes in advance.
- 9.2 Each container, coil, rack, box, or pallet of material shipped to Tower International must carry full identification, including part number, quantity, shipment date, lot numbers, and deviation numbers if applicable. Material identification must remain intact from the time of initial application by the supplier through receipt and storage at the Tower International receiving location.

10.0

Safe Packaging, Labeling and Shipping of Steel and Aluminum Coils

Coils are wound, from inside wrap throughout, with a sufficient tightness to prevent moisture penetration, which could cause bleed-in or transit-type rust and will permit stacking without collapsing a coil.

Coils will be labeled with wire tags attached to the band or adhesive labels attached only to the band. No adhesive labels are to be attached to the surface of the material itself.

Coil Conveyances (i.e., truck, railcar, etc.) meet normal shipping requirements:

Loading surfaces to be free of debris or any protuberance, which could damage the coil in loading or transit.

The I.D. Mandrel lip must be located within the lower half of the coil I.D., between the 4 and 8 o'clock position.

Chaining and tie-down practices are to be of a nature to preclude damage to coil edges on inner wraps of the coils.

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Coil cradles and/or 4"x4" wedges shall be contoured to match the surface of the coil. Any indentations or damage resulting from coil cradles and/or 4"x4" wedges are unacceptable.

When shipping by truck, coil is to be completely covered with a waterproof paper shroud (not to be interpreted as a wrapped coil). After the coil has been secured to the trailer, a tarp cover is to be applied. The tarp must be large enough to completely cover the load. Tarp is to be in good condition, free of hole and tears, which could allow moisture to contact the steel. Tarp to be properly secured to the trailer

Edge Roughness – Coil edges shall be free from “metal tabs”, fins, coating build-up and / or edge slivers.

Wall Straightness – (1) Telescoping – A deviation from a straight vertical edge to the sidewall of a coil. Tower International’s standard is any variance greater than 3/4” (19.05mm), where more than five (5) wraps are noted. (2) Weaving – The oscillation which occurs during coil winding. Sidewalls should not exceed plus or minus 1/4” (6.4mm) from a median line running from the outer wrap down to inner wrap.

Surface Oil Coating – The surface of the sheet shall be protected by a rust inhibitive oil coating that is readily removable in subsequent cleaning operations.

Coil Damage – Coils, as received in the Stamping Plant, shall be free from damage on surface, edge or wall resulting from supplier or carrier mishandling and / or chaining practice. NOTE: All incoming coil is to be 100% usable stock with no exception.

Pallet Usage – All pallets used to transport coil material will be 100% inspected prior to use so any/all defects are identified and damaged pallets are not used. NO DAMAGED PALLETS ARE TO BE USED TO TRANSPORT COILS.

Banding Requirements – Banding for ALL coils is to be a minimum width of 1.25” with no exception.

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11.0 Supplier Performance Rating System

The performance rating system described below is in use to monitor the performance of all suppliers that provide parts and/or assemblies, to Tower International customers. There are three rating areas applied to a supplier, two are reflected in the monthly scorecard, and one is on file with purchasing.

Quality Scorecards (Section 11A) - are calculated in the SRIS system based on Supplier Quality, Supplier Delivery, and Responsiveness Ratings.

Supplier Demerits (Section 11B) - are manual point deductions issued for serious and repeat actions. These points can be manual added or removed at any time.

Commercial Ratings (Section 11C) - are used to evaluate the supplier commercial rating and are not part of dynamic scoring.

A. Quality Scorecards

The purpose of the supplier performance rating system (Quality Scorecard) is to provide a means of evaluating the quality, delivery, and responsiveness performance of each supplier during a running six-month period. The minimum acceptable Quality Scorecard performance rating is 71 out of a possible 100, however at a score of <85 you may be subject to "Probation" (see section 12.0). The Supplier Performance Rating "Scorecard" will be updated monthly from data contained within SRIS, and will be based on the following:

Quality performance (50 Points) - makes up 50 points of the total rating. Factors considered in quality issues and the corresponding maximum point values are:

- Parts Per Million (PPM) performance account for 20 points
- Severity rating assigned to each complaint account for 10 points
- Repeat issues account for 10 points
- QR Count Score account for 10 points

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Delivery Performance (40 Points)- counts for 40 points of the total rating. Factors to be considered in delivery issues and the maximum possible scoring available are:

- Discrepancy issues account for 4 points
- Incorrect Labeling issues account for 8 points
- Late/Early Shipment issues account for 8 points
- Over/Under Shipment issues account for 8 points
- Packaging issues account for 8 points
- Use of Premium Freight issues account for 4 points

The following tables further define how Tower International calculates scoring based on information provided in the Quality and Delivery Reports to determine the suppliers score:

Severity Levels (SL):

Level	Severity Level	Points lost for Each Occurrence
4	Found at our Customer Location	10.00
3	Found in our Final Build	7.50
2	Found in our Process	5.00
1	Found at our Receiving	2.50
0	Concern Informational	0

SL Note: *One issue found at Tower's customer will result in the loss of all points for this category.*

Responsiveness Performance (10 Points)- Accounts for 10 Points-5 for Initial Response and 5 for Corrective Action. Points are dedicated when a response becomes late

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B. Supplier Demerits

The purpose of the supplier demerit is to provide key team members the ability to manipulate the score on a short term basis. These demerits are generally used by the corporate/program teams when serious infractions occur. Many of these items are beyond the day to day scope of the business. Examples of some of the demerits are-

- Mandatory Communication (No Response)
- Violation of Trust
- Expired/Revoked Certificate (CQI, IATF, etc.)
- Ineffective Corrective Actions
- Program Team Responsiveness

C. Commercial Rating

The Purpose of the Commercial Rating is to assist Tower International Buyer in sourcing new business. This is not part of the performance based scored card but is used in conjunction with that performance to support business decisions. Items included in this rating include:

- Financial Stability
- Total Cost Performance
- Payment Terms
- Quote Timing & Performance (New Quotes & Engineering Changes)
- Product Manufacturing Range Within Market Segmentation

12.0 Supplier Probation

12.1 Probation of a supplier is the mutual responsibility of the Tower International using locations, Purchasing and Supplier Quality Assurance. Through input into the Supplier Rating Information System

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(SRIS), supplier performance (ex: Scorecard, PPMs, etc.) will be monitored on a monthly basis by Supplier Quality Assurance and Purchasing, and will be used to identify “Focus” suppliers (<90).

- The supplier may be required to send management representatives (both Quality and Operations) to the Tower International Corporate Office to review open issues, as well as present an improvement action plan.
 - The plan must be auditable therefore; it must include specific tasks, due dates, and responsibilities.
- The supplier may be required to complete a NA-ST-050C, Supplier Quality Assessment.
- The supplier may be removed from the Approved Supplier List.
- The supplier may not be allowed to quote on any future business until removed from probation.
- An onsite visit may be performed to assess the quality concerns.
- Supplier Quality Assurance may conduct Focused Reviews of specific elements of the supplier’s quality system.

12.2 To be removed from probation the supplier:

- Must demonstrate and provide prompt containment actions and provide certified material to Tower Business Units when any quality issue arises.
- Must promptly resolve any complaints that may arise with the Business Unit.
- Must achieve zero customer complaints relative to their parts for a minimum of ninety days.
- Must sustain an 85% or greater performance score on their Supplier Scorecard for at least three (3) consecutive months or as defined by Supplier Quality on a case-by-case basis.
- Supplier Quality Assurance will verify the completion and effective implementation of all corrective action plans.

Only when the supplier is able to demonstrate the ability to meet these requirements, will that supplier be placed back on the Approved Supplier List.

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13.0 Tower International Controlled Shipping

13.1 Tower International may place a supplier on Tower International Controlled Shipping (TICS), at its discretion, when a supplier fails to meet expectations for delivery of quality products.

All suppliers, whether they are Tower International sourced, directed sources, or Customers, are eligible for TICS.

Both internal and external suppliers to Tower International are eligible for TICS.

If Tower International is placed into a re-inspection program by one of its Customers, suppliers of the parts associated with the assembly will be placed into TICS at an appropriate level, at a minimum for the associated parts.

13.2 The decision to place a supplier on TICS should be made at the Tower International Business Unit-level (Quality Leader, Business Unit Leader, etc.), with the concurrence of the Tower International Supplier Quality Manager.

In unusual circumstances, the Tower International Supplier Quality Manager may place a supplier on TICS at their sole discretion.

13.3 TICS has two levels, Level 1 and Level 2. Entrance into Level 1 is part of entrance into Level 2.

13.4 Tower International Controlled Shipping, Level 1 (TICS1)

Entrance Conditions (Any):

Failure to provide an initial response within 24 hours of the issuance of a formal report of a quality issue, via a Quality Report, on a part.

Failure to provide a CAR/8D within 14 days of the issuance of a formal report of a quality issue, via a Quality Report, on a part.

Exit from TICS Level 2 on a part.

Requirements (All):

One hundred percent off-line re-inspection of all products.

Each feature re-inspected will be marked with a water-soluble marker.

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Each container of re-inspected product will be explicitly placarded with signs denoting that the product has been certified as 100% re-inspected.

C Exit Conditions (All):

Thirty-day (calendar) period without repeat Quality Report on the part & feature in question.

The 30-day clock will be reset each time a Quality Report (on the part & feature in question) is issued.

Developing and having accepted a CAR/8D, including verification of the Permanent Corrective Actions.

Presentation of revised documentation, including PFMEA, Control Plan, Work Instructions.

Documentary evidence that every effort was taken to implement error proofing.

Request to, and written approval from the Tower International Supplier Quality Assurance Leader or their designee to exit TICS1.

13.5 Tower International Controlled Shipping, Level 2 (TICS2)

A Failure to avoid while in TICS1 a formal report of a quality issue, via a Quality Report, on a part (starts the TICS2 “clock”).

B Failure to avoid while in TICS1 a formal report of a quality issue, via a Quality Report, on a part (re-sets the TICS2 “clock”).

13.6 Entrance Conditions (Any):

A Tower International being placed in 3rd-party inspection (by its Customer, internal or external) on an assembly that contains the part.

B Repeat quality issue (as denoted by a QR), on a feature on a part.

Failure to provide a CAR/8D within 14 days of the issuance of a formal report of a quality issue, via a QR, on a part.

Special circumstances, as defined by the Tower International Supplier Quality Assurance Leader.

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13.7 Requirements (All):

One hundred percent off-line re-inspection of all products.

Each feature re-inspected will be marked with a water-soluble marker.

One hundred percent off-line re-inspection by a 3rd-party of all products.

Each feature re-inspected will be marked with a water-soluble marker.

Each container of re-inspected product will be explicitly placarded with signs denoting that the product has been certified as 100% and 3rd-party re-inspected.

13.8 Exit Conditions (All):

Thirty-day (calendar) period without repeat Quality Report on the part & feature in question.

The 30-day clock will be reset each time a Quality Report (on the part & feature in question) is issued.

Developing and having accepted a CAR/8D, including verification of the Permanent Corrective Actions.

Presentation of revised documentation, including PFMEA, Control Plan, Work Instructions.

Documentary evidence that every effort was taken to implement error proofing.

Request to, and written approval from Tower International Supplier Quality Assurance Leader or their designee to exit TICS2. Exit from TICS2 is entrance into TICS1.

14.0 Weld Quality Requirements

14.1 All suppliers who provide welded assemblies are required to perform weld quality evaluations as part of the Production Part Approval Process (PPAP). These evaluations must be conducted in accordance with the requirements contained in the Tower International Gas and or OEM Standard. The results of the welding evaluation test must be reported on the Production Part Approval. Ongoing Inspection of welds must be documented per the control plan requirements.

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14.2 Prior to sample submission each supplier of welded assemblies must prepare a Welding Manual and submit it to Tower International for approval. This manual must include the following:

Welding Procedure Specifications

Welder Qualification Testing Procedures

Base and Filler Metal Specifications and Certifications

Welding Process Quality Standards

Destructive and Non-Destructive Inspection Frequencies

Welding Process Flow Diagram

14.3 Prior to PPAP, the supplier, in conjunction with Tower International, may make provisions to have a certified Tower International Welding Inspector observe the assembly line welding process, review and approve the Welding Manual, inspect the destructive testing inspection facility and inspect the welded assemblies.

14.4 Tower International must approve any corrosion inhibitor solution or any other coatings, applied to the surface of the parts for shipping purposes for environmental concerns and acceptability. All welding, washing, and coating processes must be taken into consideration during the preparation of the Process Failure Mode Effects Analysis, Process Control Plan, and Process Flow Diagram.

14.5 If the parts are not washed prior to welding, then the supplier must approve any corrosion inhibitor solution and the manner in which the solution is applied to the part for weld ability. The welding acceptability test is determined by the production welding process. A minimum of two (2) Process Standard Tests are to be conducted on a minimum of 15 production samples. Test samples are to be welded using the production Welding Procedure Specification and are to be inspected by Tower International, who will maintain records of all approved coatings and processes.

These requirements meet and/or exceed the OEM requirements.

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15.0 Incoming Quality Program

- 15.1 The supplier is required to maintain statistical data showing evidence of control on all significant characteristics; however, the supplier must also ensure that all print dimensions conform to drawing specifications. Routine receiving inspection will not be performed on non-significant characteristics at the customer location and the supplier is expected to monitor and control these dimensions.
- 15.2 In the event that nonconforming material is discovered at any stage of the process the supplier will assume responsibility for cost incurred by Tower International or any customer as a result of this nonconformance.
- 15.3 When such a nonconformance is discovered, the Tower International receiving location will institute an inspection process to insure that the nonconformance does not enter into the production process. The supplier will be charged for this additional, non-standard operation until such time that the system has been purged of all nonconforming material and supplier corrective action plans have been proven effective.
- 15.4 When a supplier scorecard becomes red, the supplier shall be required to provide conformance data (i.e. inspection data, annual layout data, weld quality data, attribute data, quality alert data, or other data supporting conformance of the product). To escalate the process, if by the next scoring period the data is not received by the Tower Business unit, a SRIS report may be issued for customer dissatisfaction and all cost related to supporting proof of conformity (sorting, rework, 3rd party testing, and measurement), will be charged back to the supplier at standard rates. All parts that have concerns identified during the previous 6 months (current scorecard window) will be subject to conformance requirements.

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16.0 Charge-back Guidelines

All Tower International suppliers have been informed of their responsibility to provide goods and services that meet all specifications and that they are to be delivered on time. They also understand that they will be held financially responsible if their failure to do so results in loss to Tower International or any of its customers. Each Business Unit has a system in place that is able to recover such costs from our suppliers. It is expected that the system will include the following elements:

- The reason for the charge is clearly established.
- The supplier is promptly notified of the reason for the charge and made aware that charges are to be collected.
- The elements that make up the amount to be charged are clearly defined and documented.
- The amount of the charge-back is communicated to the supplier along with documentation as to how the charges were determined.
- The supplier must agree that the amount charged is justified within the allotted timeframe.
- Accounts payable will be authorized to process the debit once all parties have reached agreement on the amount to be charged.
- In case that both parties cannot agree on either the justification for the charge or the amount of the charge, the issue will be referred to Charge-Back Review Board for resolution.

In all instances, the entire process must be accomplished quickly and, if possible, within the month in which the cost was incurred. After 14 days of notification Tower International may take debit.

17.0 Nondisclosure Agreement

17.1 Purpose: To maintain confidentiality of proprietary information and trade secrets of Tower International and its customers.

17.2 When to use: Tooling purchases; Productive part purchases; Capital Equipment Purchases; Consultant Agreements; any situation involving sensitive, confidential information.

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17.3 **Retention:** Retain signed agreement with purchase order, RFQ and other documents relating to the transaction.

Nondisclosure Statement: In the course of doing business and in the interest of both parties it may become necessary to mutually agree to nondisclosure of proprietary information. If such a situation arises, contact Tower International Purchasing Colleague for guidance and assistance in executing the appropriate forms.

18.0 **Supplier Profile**

All suppliers must insure that Tower International has the latest information pertaining to the supplier's organization, capabilities, and ownership status. This information is to be maintained and updated in Tower supplier portal, Pool-4-Tool.

19.0 **Safe Launch**

For all new and changed products it is expected that supplier have a safe launch process. This process must include procedures for checking and documenting the inspections performed. This inspection must include-

- Material Type/Thickness
- Fastener Presence, Type, and Joint Quality
- Weld Validation
- Labeling
- Hole Count
- Dimensional Report

This is expected to encompass multiple set ups as appropriate.