Global Manual for Supplier Requirements

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1. Introduction

Maxion Wheels (MX) is the largest manufacturer of original equipment passenger car, commercial vehicle and off-road wheels in the World.

MX recognizes that our suppliers play a vital role in the success of our business. We are committed to reducing cost, variation and waste within our operations and as an extension of our enterprise, our suppliers have a significant impact on our results. The goal of our Supplier Development and Quality Assurance program is to drive continuous improvement and productivity efficiency within the supply chain and to foster positive working relationships that build the foundation for long term, mutually rewarding partnerships. Our team of skilled professionals is dedicated to satisfying our customers with competitive, quality products at the highest standards, delivered consistently with reliable, professional service. We expect our suppliers to demonstrate the same level of commitment and diligence, as we strive collectively towards Operational Excellence.

This document addresses the general standards and requirements applicable to all MX suppliers of both direct raw materials and product related outsourced services. The information contained in this document provides detailed instructions and explanations of MX policies and procedures that serve as guidelines for conducting routine business as it relates to quality management activities and related business matters. All suppliers are required to adhere to the Global Maxion Wheels General Terms and Conditions, as well as comply with the quality standards and requirements stated herein.

All current and potential suppliers must conform and confirm acceptance of the quality standards and requirements described in this document. MX reserves the right to terminate business with a supplier that does not support or adhere to our requirements, terms and conditions. Upon your review of this document, please sign and return the Acceptance Form (see section 16) to acknowledge acceptance of the stated quality standards and requirements.

NOTHING IN ANY SECTION OF THIS MANUAL, CONSTITUTES A PROMISE OR COMMITMENT BY MX TO SELECT OR MAINTAIN A SUPPLIER WHO MEETS THE CRITERIA SET FORTH IN THIS OR ANY OTHER SECTION. MX RETAINS SOLE DISCRETION TO SELECT SUPPLIERS AS MX SEES FIT. BOTH SIDES ALSO RETAINS SOLE DISCRETION TO TERMINATE ANY RELATIONSHIP.

Note: For all intents and purposes, the term Supplier shall be interpreted and recognized throughout this manual as any organization or business entity that is contractually engaged in the supply of product to Maxion Wheels.

2. General Terms and Conditions

A supplier's acceptance of a purchase order issued by MX constitutes acceptance of MX's General Terms and Conditions applicable as of the date of issuance specified on the purchase order. MX's General Terms and Conditions are located at MX website.

No change to the MX General Terms and Conditions, or to this MX Global Manual for Supplier Requirements, shall be effective unless agreed to in writing by a duly authorized MX representative.

In the event of a conflict between the MX General Terms and Conditions and the MX Global Manual for Supplier Requirements, the MX General Terms and Conditions shall govern.

3. Confidentiality

Any information or knowledge which MX may have disclosed or may hereafter disclose to the Supplier, in connection with the Products or the Purchase Order, shall be deemed confidential and proprietary information of MX, and shall not be disclosed by the Supplier to third parties without the prior written consent of a Vice President of MX.

MX retains ownership of all proprietary rights in any information disclosed to the Supplier in connection with the Products or the Purchase Order. Any knowledge or information which the Supplier may have disclosed or may hereafter disclose to MX in connection with the Products or the Purchase Order shall not, unless otherwise specifically agreed upon in writing by a Vice President of MX, be deemed to be confidential or proprietary information, and accordingly shall be acquired free from any restriction.

4. Safety, Environmental, IMDS, REACH Compliance and Security C-TPAT, Sustainability and Responsibility

4.1. Safety and Environmental

Suppliers shall analyze their environmental aspects and impacts, looking for the impact reduction in the environment. The following situations should be considered for the analysis of aspects and impacts, but are not limited to:

- Environmental Management System Internal and External Audits;
- Governamental Organism Inspection;
- Changes in the Process or Products;
- Acquisition or change of equipment and lay-out;
- Change of applicable regulations;
- Internal and External Communication;
- Environmental Accidents.

MX requires that all products and materials delivered to MX conform to current governmental and safety regulations on restricted, toxic substances and hazardous materials. Any applicable environmental, electrical and electromagnetic considerations must be in conformance to all applicable governmental requirements.

When delivering hazardous chemicals, the local regulations concerning the labeling and transportation of the hazardous materials must be observed as well as the correct labeling of packaging materials.

Suppliers shall furnish promptly, in such form and detail as MX directs, a material safety data sheet (MSDS) including at a minimum: (a) a list of all ingredients in the Products and any other goods or property brought by supplier or by any of the supplier's employees, agents or contractors to MX plants, (b) the quantity of all such ingredients, and (c) information concerning any changes in or additions to such ingredients. The supplier must provide MX advance written notification of modifications to materials, compositions and ingredients (including updated material safety data sheets) and receive MX approval prior to production shipment.

Prior to, and together with, the shipment of the products, goods or property, the supplier shall provide MX and all carriers sufficient written warnings and notices (including appropriate labels on the products, goods, property, containers and packing) of any hazardous material that is an ingredient or a part of any of the products, goods or property. This shall include all special handling instructions, safety measures and precautions that may be necessary to comply with applicable law. The supplier shall provide information that will support the prevention of bodily injury or property damage in the handling, transportation, processing, use or disposal of the products, goods, property, containers and packing.

All goods and property of the supplier or any of the supplier's employees, agents or contractors brought to MX plants shall be removed by the supplier at the supplier's expense, upon MX's request, and disposed of in accordance with applicable law. At all times, the supplier shall comply with all environmental, safety and other rules and regulations of MX, as well as applicable governmental rules and regulations.

Packaging shall be designed in such a way as to streamline or avoid multiple types of material and promote the use of natural, environmentally safe resources where possible. Packaging materials should be designed to enable easy assembly, separation and recycling. The supplier shall comply with specific requirements regarding the design, materials and specifications for packaging as mandated by MX for specific products or applications. (i.e. ISPM-15 Regulation of UN regarding wood packaging in trade)

All Suppliers and Contractors performing work on MX premises are required to adhere to all MX safety and environmental rules. The MX Safety and Environmental Rules for Contractors may be obtained from a facility MX Health, Safety and Environmental Specialist or Manager via the MX intranet website.

4.2. International Material Data System (IMDS)

MX supports the End-of-Life Vehicle Initiative implemented by the European Union and required by major original equipment vehicle manufacturers (OEM). The data to support this initiative is provided through the IMDS (International Material Data System).

Further information on this initiative and regarding banned and restricted substances and product life cycle can be obtained on the following IMDS Websites at http://www.mdsystem.com/html/en/home en.htm and http://www.gadsl.org

Prior to submitting a Production Part Approval Process (PPAP) package for new material or material changes to MX, a supplier must submit reportable substance data on the IMDS website.

An MX supplier shall register directly on the IMDS database and enter the Bill of Materials (BOM) and substance data (using the MX part number) directly into the IMDS website. MX requires that each supplier obtain a user ID/Password for the IMDS System from the IMDS Website mentioned above. Along with the PPAP submission, the supplier shall include a letter/email stating that the data has been entered on the IMDS website, including the part numbers, the IMDS ID number for the part and date entered.

Note: Suppliers may be required to provide IMDS information for items with previously approved part submission warrants. This is in support of the OEM IMDS requirements for existing products.

4.3. REACH Compliance

In support of the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulation enacted by the European Union, MX requires all suppliers of materials that will be, or may be, shipped to MX facilities located in the European Union, to register their regulated substances, preparations or articles with the European Chemicals Agency (ECHA) prior to shipping these materials to MX. A supplier may also provide evidence to MX that its substances, preparations or articles have been previously registered with ECHA or provide documentation that its substances, preparations or articles are exempt from REACH regulation. A copy of the REACH regulation can be found at
http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_396/l_39620061230en00010849.pdf
Further information on the regulation is at http://www.acea.be/index.php/news/category/reach
The ECHA website for registration is http://reach.jrc.it/index_en.htm

4.4. Customs Trade Partnership Against Terrorism (C-TPAT)

Since September 11, 2001, the importance of taking measures to protect our supply chain and our borders is of paramount importance. We cannot allow weapons of terrorism to infiltrate our supply channels. MX has partnered with the U.S. Customs and Border Protection, through the Customs Trade Partnership Against Terrorism (C-TPAT) program to take steps that will not only safeguard our supply chain, but also speed our products to market.

We have taken the time to thoroughly analyze our infrastructure, our hiring and termination processes, our IT networks, our physical security processes, and our reception and shipping activities. As a potential supplier to MX we ask that you also take a proactive stance in evaluating your supply chain. The C-TPAT security questionnaire must be completed if required by MX Supply Chain department in order to obtain or maintain status as an approved MX supplier. Additional information on C-TPAT can be found at www.cbp.gov/ .

4.5. Sustainability and Social Responsibility (ESG)

MX expects its suppliers to make efforts to eliminate negative impacts on the environment and the health of employees or keep them to a minimum.

In developing, manufacturing and using goods, MX suppliers should consider:

- the efficient use of energy and materials;
- the minimization of greenhouse gas emissions and other waste;
- the air quality and minimizing possible sources of pollution;
- the responsible water management and effort to reduce water consumption;
- the safe, environmentally-friendly disposal of residual waste;
- the use of renewable resources;

MX expects each of its suppliers to act with fairness, integrity, honesty, and transparency, and within the bounds of all applicable local laws, statutes and regulations, in all aspects of their business. In addition to the Code of Conduct, Code Of Ethics and the international standards endorsed by Iochpe-Maxion, along with the Iochpe-Maxion Anti-corruption Policy, the Iochpe-Maxion Gifts, Meals and Entertainment Policy, and the Maxion Wheels Health, Safety, Environmental And Quality Policy and Supply Chain Sustainability & Responsibility Policy, this MX Global Manual for Supplier Requirements highlight important standards that are consistent with Maxion Wheels' values and to which Maxion Wheels expects each of its suppliers to adhere.

MX pays special attention to all areas necessary for the fair and safe working environment and conditions for all people in the supply chain, such as compliance **with local regulations of working hours**, prohibition of child labor and **modern slavery**, fair **wages and benefits**, **harrasment and non-discrimintaion** and **freedom of association incl. collective bargaining**. The violations in these areas will always have a negative impact on cooperation or will mean the termination of cooperation according to individual evluation.

MX requires that the sustainability and ESG requirements communicated within this manual be cascaded and required for its own suppliers to ensure that these principles are respected throughout the entire supply chain.

4.6. Privacy of Personal Data

As a global company, MX is subject to the requirements of the European Union General Data Protection Regulation ("GDPR") and other laws and regulations related to the storage, processing, transfer and deletion of personal data. To the extent that suppliers receive any personal data from MX, suppliers must comply with all applicable data privacy laws and regulations, including without limitation the GDPR. MX acknowledges that it is the data controller for any personal data provided to suppliers and suppliers are the data processors. Both parties will comply with their obligations under the Directive 95/46 and on or after 25 May 2018 Regulation 2016/679 which repeals Directive 95/46.

4.7. Conflict Minerals

Suppliers are expected to comply with Section 1502 of the US Dodd-Frank Wall Street Reform and Consumer Protection Act of the United States of America (the "Act") and its implementing regulations related to sourcing tin, tantalum, tungsten and gold (the "Conflict Minerals") from

the Democratic Republic of the Congo and adjoining countries ("DRC Countries"). Specifically, supplier must undertake (1) a reasonable inquiry into the country of origin of Conflict Minerals incorporated into any products provided to MX, (2) due diligence of its supply chain, as necessary, to determine if Conflict Minerals are sourced from the DRC countries and (3) risk assessment and mitigation actions necessary to implement the country of origin inquiry and due diligence procedures. Suppliers are further required to (1) to respond promptly to each inquiry by MX as to all Conflict Minerals that may be contained in Suppliers' products; (2) notify MX if there is a change in status as to Conflict Minerals in their products; and (3) to cooperate promptly as required by MX with MX's efforts to comply with the Act.

5. Supplier Performance

MX monitors the performance of its suppliers using standard metrics which evaluate product quality, delivery and service. The information and data gathered from the performance measurement process helps to guide business sourcing decisions, as well as develop continuous improvement initiatives within the supply base. MX supplier performance is routinely monitored and measured in the following areas:

- product quality i.e. PPM: Defective Parts per Million
- delivery performance i.e. OTD: On Time Delivery
- communication issues in the delivery locations
- customer disruptions at the receiving plant, including yard holds and stop ships
- number of occurrences of premium freight for MX that is caused by the Supplier
- special status customer notifications related to supplied quality or delivery issues
- dealer returns, warranty, field actions, and recalls related to supplied quality or delivery issues

6. Management System and Assessment

MX has implemented an Integrated Management System. This Management System ensures compliance to IATF 16949 and ISO 9001 quality management systems requirements, to the environmental management systems requirements of ISO 14001, as well as to the fundamental requirements mandated by law and/or customer demand. This Management System is independently certified by a third party international certification registrar.

MX is committed to relentlessly improving customer satisfaction, developing the best people, reducing variation, pursuing compliance and continually improving the overall effectiveness of our Management System.

6.1. Certifications and Other Requirements

All MX suppliers are expected to maintain mandatory certifications that produces defect free parts through detection, prevention and continuous improvement activities. The automotive industry has adopted ISO 9001 and IATF 16949 as the minimum quality certification standard for suppliers.

As such, suppliers providing products to MX must be certified to ISO 9001 and demonstrate compliance to the MAQMSR (Minimum Automotive Quality Management System Requirements for Sub-Tier Suppliers) or compliance to the IATF 16949 or have certification to IATF 16949, latest edition. All suppliers that supply materials or subcomponents or used to manufacture MX products or product related outsourced services must comply with this requirement. MX reserves the right to monitor a supplier's compliance and progress toward attainment of certification to these standards by way of process audits, reviews, quality system assessments, etc.

In the event that the supplier's third party certificate is revoked, the supplier must notify MX Purchasing in writing within five business days of revocation.

Suppliers should reference and conform to the latest standards and requirements of the Automotive Industry Action Group (AIAG), ISO 9001, IATF 16949 and other automotive industry standards such as:

- Advanced Product Quality Planning and Control Plan (APQP)
- Measurement System Analysis (MSA)
- Production Part Approval Process (PPAP)
- Failure Mode and Effect Analysis (FMEA)
- Statistical Process Control (SPC)

6.2. ISO 14001, CDP and Legal Requirements

Maxion Wheels requires that its suppliers:

Conduct its operations to and assure that all materials and products provided to Maxion Wheels meet or exceed all applicable environmental laws and regulations of the jurisdictions in which the supplier does business. Suppliers must meet the same requirements that our customers demand of us. In addition, suppliers are strongly encouraged to install environmental systems in their facilities that are compliant to ISO 14001.

Comply with all applicable government statutes, regulations and standards of their country as well as the country where the Maxion Wheels plant to which the supplier will provide is located.

Suppliers are encouraged to participate and complete the online response system climate change survey by the due date set forth annually by CDP (Climate Disclosure Project). Because Maxion Wheels uses this information to understand climate related projects, emissions reduction efforts and carbon footprint of the participating organizations, we appreciate receipt of the information via the online response system. Beyond the general survey, we ask that our suppliers also utilize the Supply Chain questions at the end of the survey to allocate emissions from the services or products to Maxion Wheels.

6.3. Supplier Re-Assessment

MX requires that the supplier meet the requirements of the latest MX Supplier Management System Assessment. After the initial approval, a re-audit according VDA 6.3 is conducted in case of ;

- Process changes
- New machines implementation
- Change on location
- Repetitive quality and delivery issues.

Resulting from this re-audit, an action plan is to be established that needs successful closure within and no later than 90 days.

7. Advanced Product Quality Planning (APQP)

Advanced Product Quality Planning (APQP) is a structured process of defining and organizing the action plan necessary to assure that a product satisfies all customer requirements. The goal of the APQP process is to facilitate proper communication and key information exchange with the supplier and customer teams involved in the development and production of a specific product, and to engage effective quality planning that embodies critical concepts of defect prevention and continuous improvement, i.e., resource planning, early change management, cost reduction, etc.

MX will communicate all applicable statutory and regulatory requirements and special product and process characteristics to the suppliers for the development and production of a specific product and the suppliers are required to cascade all applicable requirements down the supply chain to the point of manufacture.

MX requires that a supplier execute advance quality planning and program management in accordance with the AIAG Advanced Product Quality Planning manual and fulfill all requirements specified by MX in a timely, efficient manner.

The supplier must develop, document, control and distribute to MX, a project/program management timeline which specifies items such as critical project/program events, key dates and assigned responsibilities. The timeline shall be identified by part number, description, supplier name, originator, revision level and date.

The status of the quality planning activity for a given project/program and progress toward milestone events must be monitored and reported to MX on a routine basis. The supplier is responsible to update the project/program timeline regularly and submit it to the appropriate MX representative for review and verification.

Any deviation from the designated APQP requirements must be approved in advance by MX. All deviation requests must be documented and supported by a detailed recovery action plan formally submitted by the supplier for MX approval.

Once MX approves a supplier's submission for production part approval, no changes to the supplier's production process can be implemented prior to the start of production without formal review and approval from MX.

8. Production Part Approval Process (PPAP)

8.1. General

The purpose of the Production Part Approval Process (PPAP) is to determine if all MX design record and engineering specification requirements are properly understood by the supplier and that the manufacturing process developed for a specific product has the potential to produce product consistently meeting those requirements during an actual production run at the quoted production rate.

The following describes the PPAP process. It is the supplier's responsibility to be in accordance with, and compliant to, the AIAG PPAP manual requirements. The AIAG PPAP manual establishes the minimum requirement for MX suppliers. MX reserves the right to impose additional requirements with regard to a supplier's PPAP submission for a given product or application, i.e., OEM specific requirements. MX PPAP requirements apply to production products and bulk materials. Questions regarding specific PPAP requirements should be forwarded to the appropriate MX representative.

The supplier must obtain MX production part approval for the following:

- A new part or product
- Correction of a discrepancy on a previously submitted part
- Engineering change to design records, specifications, or materials for production product/part numbers
- All changes or activity affecting fit, form, function, durability or performance of product or higher level assembly
- Manufacturing process change (includes use of other material than was used in the previously used part or product; production from new or modified tools (except perishable tools), dies, molds, patterns, etc.; additional or replacement tooling; production following an upgrade or rearrangement of existing tooling or equipment; change of suppliers for parts, nonequivalent materials or services (heat treat, plating, etc.); process and product change related to components manufactured by suppliers; change in test/inspection method, etc.)
- Location changes (production from tooling and equipment transferred to a different plant site or from an additional plant site)

8.2. Requirements for PPAP Retention/Submission

Parts for production part approval must be taken from a significant production run. This run would typically be from one hour to one shift's production or a minimum of 300 consecutive parts. For bulk materials, the quantity produced must be from a run during the steady state operation of the process.

During the PPAP run, any result that is outside the specification is cause for suspending the submission of PPAP sample product/parts, documentation and/or records. When this situation occurs, MX must be notified immediately. In such cases, the supplier shall make every effort to correct the process. If the supplier is unable to meet all of the PPAP requirements, the supplier must contact MX to determine appropriate corrective action.

8.3. Supplier Notification and Submission of Change Request

The supplier must notify MX of any design and process intended changes such as moving equipment within the same facility, moving equipment to the another facility, and any other changes as indicated in the AIAG PPAP manual. The Supplier Change Request must be sent to the appropriate MX contact by email/fax and the supplier must obtain verification to confirm form receipt. Notification of a change request must be given so that MX has adequate time to properly perform the necessary activities, such as initial communication and investigation of the effects of the change, before determining whether or not to authorize the process change. Where applicable, adequate safety stock and ramp up needs must be defined and realized, along with MX verification and approval of an adequate contingency plan before a supplier will be authorized to initiate the change process.

8.4. Submission Level

The submission level identifies the types of documents that need to be submitted to MX. The complete set of PPAP documentation must be retained by the supplier. MX reserves the right to review all of the PPAP documents onsite at the supplier's facility at any time. The level of submission is defined as:

Level 1: Part Submission Warrant (PSW) only (and for designated appearance items, an Appearance Approval Report) submitted to MX.

Level 2: PSW with product samples and limited supporting data submitted to MX.

Level 3*: PSW with product samples and complete supporting data submitted to MX.

Level 4: PSW with other requirements defined by MX.

Level 5: PSW with product samples and complete supporting data available for review at the supplier's manufacturing location.

*The MX default submission is a Level 3. MX may designate a different PPAP submission level when deemed appropriate for a specific product.

8.5. Part Submission Status

MX will notify the supplier of the disposition of the PPAP submission. The PSW will be noted, signed and dated by MX – one copy will be sent to the supplier and another retained by MX. The different types of status are listed as:

- **Full Approval:** Indicates that the part or material meets all MX specifications and requirements. The supplier is therefore authorized to ship production quantities of the product subject to releases from MX. Without full approval, serial production and delivery is not permitted. After production part approval, the supplier shall assure that future production continues to meet all MX requirements.

- **Interim Approval:** Permits shipment of material for production requirements on a limited time or piece quantity basis. It will only be granted when the supplier has clearly defined the root cause of the nonconformities preventing production approval and has prepared an interim approval action plan approved by MX. Re-submission to obtain "full approval" is required. If the allowable time has elapsed, the maximum number of pieces has elapsed or failure to meet any of the agreed upon action plan(s) on an interim approval, then the next load of material is subject to being rejected. No additional shipments are authorized unless an extension of the interim approval is granted or full PPAP submission has been approved.

- **Rejected:** Either the submission, the production lot from which it was taken, or the accompanying documentation does not meet MX requirements. Corrected product and/or documentation shall be submitted and approved before production quantities may be shipped.

8.6. Record Retention

The supplier must retain all PPAP related documents and their revisions for the length of time that the part is active plus one calendar year, but at least 15 years. This requirement does not supersede any governmental requirements.

9. Corrective Action

9.1. General

In order to ensure that MX's products meet customer requirements, MX requires that the supplier provide parts that meet MX's requirements. If a nonconforming product is produced by the supplier, the supplier must follow the corrective action requirements regardless of where the nonconformance was identified, i.e., the supplier's facility, at MX, in-transit, at MX's customer, etc. This is to ensure nonconforming product is contained, root cause of the problem is identified and proper actions are put in place to prevent recurrence in the process. MX reserves the right to determine when a supplier corrective action response is complete and has the final determination of the corrective action closure date.

A corrective action report may be issued to the supplier to address the following:

- Supplier part or material nonconformance to specifications
- Supplier packaging nonconformance (including any labeling issues)
- Issues with shipping or delivery of production parts or materials

- Supplier responsible warranty
- Procedural or process nonconformity, i.e., failure to comply with the established procedures, meet deadlines, communicate in timely manner, etc.

9.2. Basic Corrective Action Process Steps

When a problem does occur, the supplier is to place their operations on immediate containment to protect MX from receiving defective material. Incidents of defective material may also require supplier containment action at an MX facility.

In such cases, the supplier is responsible to assign a third party organization, approved by MX, to conduct the required containment action onsite at the MX facility. The supplier is responsible for the costs associated with the third party containment activity.

When implementing a containment action plan, the supplier is to use the following information for an effective containment process:

1. Identify the problem.
2. Quarantine all suspect material including raw material (if applicable), work in-process, finish goods inventory, and/or material in-transit.
3. Clearly identify the suspect material and ensure that all appropriate personnel are aware of the identification.
4. Establish a clear break point for the nonconforming material and break point for the certified material.
5. Review material to determine disposition, i.e., sort, rework, accept the material “as is” with MX Engineering approval, reject, scrap, etc.
6. Notify MX immediately if there is a possibility that nonconforming material has been shipped.
7. Identify root cause of the nonconformance.
8. Implement appropriate corrective actions.
9. Validate the effectiveness of the implemented corrective actions.
10. Update all appropriate documentation to include the new controls implemented and return to the normal process production. Apply corrective actions to all similar processes.

Note: The supplier must review any changes to process, material and/or quality documentation with MX to verify production approval requirements.

The supplier will receive a Corrective Action Notice for documenting corrective action plans. A corrective action notice/report will be issued when MX has verified that the nonconformance was caused by the supplier.

A nonconformance that may result in a Corrective Action Report (CAR) include, but are not limited to, discrepancies or problems with:

1. Dimensions
2. Appearance
3. Finish, i.e., flash, burrs

4. Contamination
5. Material Specifications
6. Machining
7. Shipping & Delivery Compliance
8. Packaging
9. Labeling issues
10. Customer Satisfaction
11. Warranty issues

9.3. Response Timing Requirements

Suppliers are expected to monitor and respond on time to all Corrective Action Reports issued by MX. Responses to reported quality or delivery problems are based on the following standards:

1. All Supplier Initial Responses must be submitted in writing to MX within 24 hours of problem notification.
2. Immediate and ongoing containment plan actions must be taken to protect MX and MX customers from receiving a defective part.
3. Initiate any rework or sorting as an immediate containment at MX.
4. Disposition the nonconforming parts or material at MX and in-transit. Identify all suspect material at any MX location or in-transit.
5. The date of the next shipment of certified material must be identified and communicated to MX.
6. Provide the names, titles and phone numbers of the Supplier Quality and Materials representatives.

If an initial response is not received from the supplier within the required timeframe provided above, MX may issue another Corrective Action Report for late response. **All Final Responses need to be submitted to MX within the next 30 business days after notification of the problem.** If the problem is still under investigation, the supplier must submit their Action Plan with the dates and responsible persons for each activity on the plan within the same 15 business day requirement. When submitting a final response to a problem case, MX requires all suppliers adhere to the following standards:

1. A form that reflects all of the elements of a Global 8D (G8D) (see section 14.3) must be completed. Use data, operator's experience, and cross-functional teams to complete the Analysis.
2. Verify that all areas in the process have been thoroughly investigated.
3. Verify the "What is the problem, why wasn't the problem detected, and what happened systemically."
4. Verify that the nonconformance ties back to issues such as design, operational problems, tier 2 and tier 3 management, etc.
5. Verify that the detection ties back to documents such as Control Plans, Process Flows, etc.

6. Review the Process Control Plan & FMEA for updating (see Potential Failure Mode and Effects Analysis (FMEA) and Advance Product Quality Planning (APQP) reference manuals).
7. The final response must include a verification plan that will validate the supplier's permanent corrective action. Validation data must be submitted that proves that the corrective action is effective.

MX expects that an auditing process will be established by the supplier where various levels of management audit the implemented corrective actions and approve the final verification plan.

Suppliers will be measured on the timeliness of their final response. If an adequate response cannot be completed within 15 business days, the supplier must provide MX with an Action Plan.

It is expected that suppliers will continuously work toward reducing or preventing CAR incidents. Repetitive CAR's for the same or similar problem(s) as well as lack of response and resolution to a nonconforming issue is not acceptable and may result in a Customer Satisfaction Corrective Action Report.

A supplier's failure or refusal to address corrective action concerns could result in loss of current MX business and/or future business suspension.

10. Controlled Shipping

For some supplier related problems, MX may require Controlled Shipping conditions to supplier.

The intent of this conditions is to implement a containment action plan to protect MX and our customer from the receipt of nonconforming parts. One or more of the following issues will be considered:

- Incapable production process
- Pass-through issues
- Repeat Corrective Action Reports
- Spills and/or major disruptions
- Severity of the problem
- Inadequate containment action causing nonconforming parts to reach MX or its customers

Supplier Responsibilities:
The following steps should be followed by the supplier;

- Immediately establish a separate containment area at their location. (If needed and agreed with MX containment can be performed by a Third Party Company.) Containment area must be highly visible and properly lighted, equipped, etc.
- Containment area must have well defined efficient material flow including identified areas for incoming and outgoing material.
- Immediately establish an additional inspection activity over the current controls.

- Containment operators must have the proper job instructions, visual aids, boundary samples, tools, equipment, etc., readily available to them.
- Establish breakpoints for conforming material.
- Ensure traceability of nonconforming material at customer's facility, in-transit and all storage locations.
- Establish appropriate material identification to identify material certified for production.
- Containment activity results must be updated on a daily basis and reviewed by the supplier's top management to ensure that the corrective actions being taken are effective or if additional activities are required to protect MX and its customers.
- Meet the defined exit criteria.
- Submit a request for exit from Controlled Shipping and provide the appropriate data and documentation, including the process performance and corrective/preventive actions in place to prevent recurrence.

MX will review and evaluate the submitted documentation to determine if the exit criteria has been met, and will communicate, in writing, that the supplier has been removed from Controlled Shipping.

11. Contingency Plans

Suppliers must prepare Contingency Plans to ensure continuity of supply to MX in the event of any of the following: Key equipment failures; interruption from externally provided products, processes and services; recurring natural disasters; fire; utility interruptions; labor shortages; or infrastructure disruptions.

The contingency plans must include a notification process to MX plants involved and include provisions to validate that the manufactured products continues to meet specifications after the re-start of production following an emergency in which production was stopped and if the regular shutdown processes were not followed.

12. Cost Recovery

All costs or debts resulting from selection, rework and parts not conforming to the Final Customer and / or Maxion Wheels, field returns, testing conducted by independent laboratories, controlled shipments, dimensional from quality problem, are the total responsibility of the supplier

At any time during the APQP process or production, the supplier should refer questions regarding the charges to the MX facility Materials and Quality contacts. It is the intent of MX to work with each supplier to produce 100% conforming material.

13. MX Forms

13.1. C-TPAT Security Questionnaire

Item	Procedural Security Questions	Status	Comments
1.	Has the management with executive responsibility in your organization defined and documented its security policy and objectives? Is the policy implemented, understood and maintained throughout the organization?	☐ Yes ☐ No	
2.	Has the responsibility, authority, interrelationship of personnel who manage, perform, and verify work affecting security been defined and documented? Does your organization have a method to identify the security resource requirements?	☐ Yes ☐ No	
3.	Does your organization develop and deploy a security plan appropriate for your supply chain? Does your organization have documented methods to track, update, revise, review, communicate and ensure the security plan is followed throughout the supply chain as appropriate?	☐ Yes ☐ No	
4.	In support of your security plan, has your organization developed and implemented procedures to assure security of: Procedures and Documents; Physical Buildings and Areas; Access of Personnel; Authorized Personnel; Personnel Training; Manifest Control; and Conveyance Integrity?	☐ Yes ☐ No	
5.	Are security documents and data reviewed and approved by authorized personnel prior to issue? Are security documents and data retained on electronic media controlled, including access, security, loss prevention, approval for viewing and use?	☐ Yes ☐ No	
6.	Are changes in security documents reviewed and approved by the same functions/organization that originally performed the review and approval?	☐ Yes ☐ No	
7.	Is there a documented process to evaluate security that includes frequency of determination, and how objectivity and validity are assured? Does your organization carry out internal security system audits as planned? Are trends in security performance reviewed by senior management?	☐ Yes ☐ No	
8.	Are the appropriate corrective or preventive actions developed to eliminate the causes of actual or potential security nonconformances?	☐ Yes ☐ No	
9.	Is management with responsibility and authority for corrective action promptly informed of terrorist concerns and security breaches or processes that become compromised? Does your organization have the ability to notify Customs and other Law Enforcement Agencies in cases where anomalies or illegal activities are detected or suspected by the company?	☐ Yes ☐ No	
10.	Does your organization document trends in the security, operational performance, and current security levels, for all shipping lanes? Are trends in data and information compared with progress toward business objectives, to lead to appropriate action and priorities for resolving security problems?	☐ Yes ☐ No	

Item	Physical Security Questions	Status	Comments
1.	What plant security system is utilized?	☐ Yes ☐ No	
2.	Does your plant have a visitor control system that restricts and controls personnel who enters the plant or buildings?	☐ Yes ☐ No	
3.	What specific safeguards are in place to restrict access during off hours?	☐ Yes ☐ No	
4.	For after hours building security, is your security system equipped with motion activated detectors?	☐ Yes ☐ No	
5.	Are there procedures in place to investigate and resolve breaches of security?	☐ Yes ☐ No	
6.	Are there procedures established that evaluate the effectiveness of the physical plant security system?	☐ Yes ☐ No	
7.	Are records maintained to demonstrate conformance to the specified requirements and the effective operation of the physical security system?	☐ Yes ☐ No	

Item	Access Control Questions	Status	Comments
1.	Does your organization have an access control system appropriate for its position in the supply chain?	☐ Yes ☐ No	
2.	Does your access control system regulate unauthorized access to shipping, loading dock and cargo areas for all hand-off points appropriated for your organization's supply chain?	☐ Yes ☐ No	
3.	Are the logistics service providers for your organization C-TPAT approved? If not, do these logistics service providers have a program defined to achieve C-TPAT approval? (if not, all unapproved C-TPAT logistics suppliers must fill out and return this questionnaire).	☐ Yes ☐ No	
4.	Does your organization have the system capability to identify access control requirements in support of new business opportunities, changes in providers, or emergency circumstances?	☐ Yes ☐ No	
5.	Does your organization's access security system define controls for positive identification, recording, and tracking of all employees, visitors and vendors?	☐ Yes ☐ No	
6.	Does your organization's access security system define methods for challenging unauthorized/unidentified persons and properly reporting suspicious persons to the appropriate security representative?	☐ Yes ☐ No	
7.	Does your organization's access security system have the capability to verify that these controls are suitable and effective?	☐ Yes ☐ No	
8.	Are there records to support that the system is capable and verified?	☐ Yes ☐ No	

Item	Personnel Security Questions	Status	Comments
1.	Are methods developed for evaluating personnel with respect to security?	☐ Yes ☐ No	
2.	Does your company conduct 100% pre-employment screening to include background checks and application verifications?	☐ Yes ☐ No	
3.	Is there an employee code of conduct which clearly describes inappropriate behaviors?	☐ Yes ☐ No	
4.	Are employees required to wear an identification badge?	☐ Yes ☐ No	
5.	Is there a security system in place that requires employees to badge or clock in when entering or exiting the building?	☐ Yes ☐ No	
6.	Are procedures in place to investigate and resolve personnel security issues at your location?	☐ Yes ☐ No	
7.	Are records maintained to demonstrate conformance to the specified requirements and the effective operation of the personnel security system?	☐ Yes ☐ No	

Item	Education & Training Questions	Status	Comments
1.	Have personnel in your organization received C-TPAT Awareness Training?	☐ Yes ☐ No	
2.	Do personnel in your organization know your security policy?	☐ Yes ☐ No	
3.	Do personnel in your organization understand the scope of the C-TPAT requirement appropriate for their supply chain to include current & proposed supply agreements?	☐ Yes ☐ No	
4.	Do personnel in your organization understand their role in C-TPAT and minimum security requirements appropriate for their functional activity?	☐ Yes ☐ No	
5.	Do personnel in your organization understand the minimum criteria for unauthorized access and goods tampering?	☐ Yes ☐ No	
6.	Do personnel in your organization understand your response plan for unauthorized access and goods tampering?	☐ Yes ☐ No	
7.	Have personnel in your organization been trained in your security system corrective and preventive action system?	☐ Yes ☐ No	
8.	Does your organization maintain records of your security system training?	☐ Yes ☐ No	

Item	Manifest Control Questions	Status	Comments
1.	Has your organization documented its system for controlling all relevant shipping packets appropriate for your position in the supply chain?	☐ Yes ☐ No	
2.	Does your system have methods for controlling: manifest data formatting; manifest routing; authorized manifest sign-offs and manifest data auditing?	☐ Yes ☐ No	
3.	Does your system have methods for investigating and resolving: data for completeness and accuracy; missing documentation; late filings and tampering?	☐ Yes ☐ No	
4.	Does your organization have methods for reviewing suspicious manifest packets routing, sign-offs and timings?	☐ Yes ☐ No	
5.	Has your organization defined and implemented procedures to support the manifest controls and investigations described in questions 2, 3 and 4?	☐ Yes ☐ No	
6.	Does your organization have methods for reviewing nonconformance in manifest control to develop corrective and preventative action?	☐ Yes ☐ No	
7.	Does your organization have evidence to support the suitability and effectiveness of its manifest control system?	☐ Yes ☐ No	

Item	Conveyance Control Questions	Status	Comments
1.	Has your organization documented its system for controlling the conveyance of all goods appropriate for its position in the supply chain?	☐ Yes ☐ No	
2.	Does your system have methods for goods control to include: - Introduction & removal of cargo. - Properly marked, weighed, counted and documented goods. - Verification of seals on transportation equipment. - Detection and reporting of shortage, overage and damage to merchandise. - Tracking the timely movement of incoming and outgoing goods. - Proper storage of empty and full transportation equipment to prevent unauthorized access?	☐ Yes ☐ No	
3.	Has your organization defined and implemented procedures to support the control and verification of goods movement appropriate for its position in the supply chain?	☐ Yes ☐ No	
4.	Does your organization have methods for reviewing suspicious goods movements?	☐ Yes ☐ No	
5.	Does your organization have methods for reviewing and approving logistics providers?	☐ Yes ☐ No	
6.	Does your organization have methods for reviewing anomalies in conveyance control for notification of proper authorities and development of plans for system improvement?	☐ Yes ☐ No	
7.	Does your organization have evidence to support the suitability and effectiveness of its conveyance control system?	☐ Yes ☐ No	

13.2. Part Submission Warrant

Part Name		Customer Part Number	
Shown on Drawing No.		Organization Part #	
Engineering Change Level		Dated	
Additional Engineering Changes		Dated	
Safety and/or Government Regulation ☐ Yes ☐ No		Purchase Order No.	Weight (kg)
Checking Aid No.		Checking Aid Engineering Change Level	Dated

ORGANIZATION MANUFACTURING INFORMATION

Organization Name & Supplier/Vendor Code

Street Address

City | Region | Postal Code | Country

CUSTOMER SUBMITTAL INFORMATION

Customer Name/Division

Buyer/Buyer Code

Application

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? ☐ Yes ☐ No ☐ n/a

Submitted by IMDS or other customer format:

Are polymeric parts identified with appropriate ISO marking codes? ☐ Yes ☐ No ☐ n/a

REASON FOR SUBMISSION (Check at least one)

- ☐ 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
- ☐ Supplier or Material Source Change
- ☐ Change in Part Processing
- ☐ Parts Produced at Additional Location
- ☐ Other - please specify below

REQUESTED SUBMISSION LEVEL (Check one)

- ☐ Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
- ☐ Level 2 - Warrant with product samples and limited supporting data submitted to customer.
- ☐ Level 3 - Warrant with product samples and complete supporting data submitted to customer.
- ☐ Level 4 - Warrant and other requirements as defined by customer.
- ☐ Level 5 - Warrant with product samples and complete supporting data reviewed at organization's manufacturing location.

SUBMISSION RESULTS

The results for ☐ dimensional measurements ☐ material and functional tests ☐ appearance criteria ☐ statistical process package

These results meet all drawing and specification requirements: ☐ Yes ☐ No (If "No" - Explanation Required)

Mold / Cavity / Production Process

DECLARATION

I hereby affirm that the samples represented by this warrant are representative of our parts which were made by a process that meets all Production Part Approval Process Manual Requirements. I further affirm that these samples were produced at the production rate of / hours. I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.

EXPLANATION / COMMENTS:

Is each Customer Tool properly tagged and numbered? ☐ Yes ☐ No ☐ n/a

Organization Authorized Signature		Date	
Print Name	Phone No.		Fax No.
Title	E-mail		

FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part Warrant Disposition: ☐ Approved ☐ Rejected ☐ Other			
Customer Signature		Date	
Print Name	Customer Tracking Number (optional)		

13.3. Global 8D Corrective Action

Title	**Date Opened**	**Last Updated**
Product/Process Information [Part number, Vehicle, Customer location, Job #]	**Organization Information / Supplier Code**	
DØ Symptom(s)		
DØ Emergency Response Action(s) [Complete WITHIN 24 hrs: Notification of Field Reps; Containment of material in transit and at customer location] **Verification/Validation** [Sort results]		**Date Implemented** [WITHIN 24 HRS]
D1 Team (Name, Dept, Phone): **Champion:** [Manager/Supervisor of the Area of Defect] **Team Leader:** [Any Employee] **Team Members:** [Cross-functional team relative to nature of problem]	**D2 Problem** **Problem Statement** **Problem Description**	
D3 Interim Containment Action(s) [Notification of in-plant personnel; Containment of in-house material; Inspection method; Identification of certified material]; Complete WITHIN 24 hours **Verification/Validation** [Sort Results (Parts, Not Skids)]		**Date Implemented** [WITHIN 24 HRS]
D4 Root Cause [Utilize problem solving tools; ex: fishbone, 5-Why, Cause and Effect, Pareto Charts, etc. Include Visual QOS aspects, i.e., photos, charts, drawings, etc. as applicable] **Verification-** [Duplicate problem, turn it on and off]		**% Contribution**
D5 Chosen Permanent Corrective Action(s) [Poka-Yokes, PM Controls, PLC Lockouts, etc. Include Visual QOS aspects, i.e., photos, charts, drawings, etc.] **Verification-** [Demonstrate that the problem can be turned on/off and verified statistically with data]		**% Effective**
D6 Implemented Permanent Corrective Action(s) **Validation-** [Purchase orders, Procedures/Work Instruction revisions, Training sign offs, SPC, etc.] - Has the FMEA been updated? (*Y/N*)___ ; When? (*Revised Date*)_____ - Has the Control Plan been updated? (*Y/N*)____ ; When? (*Revised Date*)_____		**Date Implemented**
D7 Preventive Actions / Systemic Preventive Recommendations [Apply to similar processes, products]		**Date Implemented** **Responsibility**
D8 Team Sign-Off and Individual Recognition	**Date Closed**	**Reported By**

14. References

AIAG Automotive Industry Action Group - Website: www.aiag.org

Description: For ordering manuals such as APQP, FMEA, MSA, PPAP and SPC.

International Automotive Task Force (IATF) – Website: www.iatfglobalovesight.org

Description: For ordering the IATF 16949 requirements manual

15. Glossary

Active Part: Currently being provided to MX for original equipment production or product related outsourced service. A part is considered active until tooling scrap authorization is given by MX. Where the tooling is owned by the supplier or situations where multiple parts are made from the same tool, written confirmation from MX is required to deactivate a part.

Advanced Product Quality Planning (APQP): As referenced in the AIAG APQP Manual. APQP focuses on defect prevention and continuous improvement in order to build safe and robust processes without generating defective product as opposed to defect detection processes which only react by correcting the process once the defect is detected.

Automotive Industry Action Group (AIAG): AIAG's primary goals are to reduce cost and complexity within the automotive supply chain and to improve speed-to-market, product quality, employee health, safety and the environment. MX requires that suppliers utilize the appropriate information from the AIAG manuals including, but not limited to, APQP, FMEA, MSA, PPAP.

Bias: The difference between the observed average of measurements and a reference value; historically referred to as accuracy. Bias is evaluated at a single point within the operating range of the measurement system.

Bulk Material: Used to make a part or added to the part per a requirement. Examples may include ferrous and nonferrous metals, chemicals compounds and mixtures such as coatings, plastics and polymers.

Control Plan: A document referenced in the AIAG APQP and Control Plan manual. A Control Plan provides a written summary description of the systems used in minimizing process and product variation. The Control Plan describes the actions that are required at each phase of the process such as receiving, in process and periodic requirements to assure that all process outputs will be in a state of control. The special characteristic classification section may classify an item as a safety issue by using designated terms such as critical, safety and significant.

Design Review: A proactive process approach where project problems and misunderstandings are prevented.

Design Validation: Testing to ensure that a product conforms to customer requirements. The process follows design verification and is normally performed on the final product under defined operating conditions. Multiple validations may be performed if there are different intended uses.

Design Verification: Testing to ensure all design outputs meet design input requirements. The activities could include design review, performing alternate calculations and review of design stage documents before release, etc.

Durability: The probability that an item will continue to function at customer expectation levels, at the useful life of the product/vehicle without requiring overhaul or rebuild due to wear.

Failure Mode and Effect Analysis (FMEA): As referenced in the AIAG FMEA manual. The two types of FMEA's are for Design (DFMEA) and Process (PFMEA). A document that follows the standard set of criteria so that the correct risk priority number (RPN) for each potential failure effect situation can be calculated. RPN is rated between 1 and 1000 and is calculated as: RPN = Severity x Occurrence x Detection. A lower RPN number represents a lower potential risk of failure.

Linearity: The difference in bias errors over the expected operating range of the measurement system. It correlates the multiple and independent bias errors over that operating range.

Measurement System: A collection of instruments or gages, standards, operations, methods, fixtures, software, personnel, environment and assumptions used to quantify a unit of measure or fixed assessment to the feature characteristic being measured.

Measurement System Analysis (MSA): As referenced in the AIAG MSA manual.

On Time Delivery (OTD): The delivery of the specified quantity of product/parts within a specified timeframe. The delivery date is reflected in the automatic shipment notification (ASN) system or other agreed upon method. % OTD equals the number of parts delivered on time divided by the total number of parts ordered multiplied by 100.

Overall Equipment Effectiveness (OEE): The OEE calculation is based on three OEE factors availability, performance and quality and is calculated as Availability x Performance x Quality:

Availability ratio – Time equipment was available for operation divided by the total calendar period for which O.E.E. is being calculated. Availability takes into account down time loss and is calculated as (Operating Time / Planned Production Time).

Quality Ratio - Quantity of "A" grade/Prime grade material produced divided by total production (Off grade+Prime grade). Quality takes into account quality loss and is calculated as (Good Pieces / Total Pieces).

Performance Ratio - Rate of production divided by Capacity of machine. Performance takes into account speed loss and is calculated as {Ideal Cycle Time / (Operating Time / Total Pieces)}.

The Ideal Cycle Time is the minimum cycle time that a process can be expected to achieve in optimal circumstances. Since Run Rate is the reciprocal of Cycle Time, Performance can also be calculated as {(Total pieces/Operating Time) / Ideal Run Rate}.

Part or Product: Material that eventually is or could be assembled on a vehicle, whether in bulk material form, a component of a subassembly or the complete subassembly.

Parts Per Million: The performance of a process in terms of actual nonconforming material, i.e., defects per million opportunities. PPM = (Parts Rejected / Parts Received)(1,000,000).

Part Submission Warrant (PSW): An automotive industry standard form required for all newly tooled or revised products in which the supplier confirms that all inspections and tests on production parts are in conformance with MX requirements.

Process Capability: An indicator of the total range of inherent variation in a stable process. It can be determined using data from control charts and verified by using a histogram chart and other calculations to determine process stability. Cp, Cpk, Pp and Ppk calculations are used and referenced in the AIAG Statistical Process Control manual.

Process Flow Diagram/Chart: A schematic representation of the current or proposed process flow. It can be used to analyze sources of variations of machines, materials, methods, manpower, etc., from the beginning to end of a manufacturing or assembly process. A process flow chart that depicts the flow of materials through the process using standardized symbols.

Production Part Approval Process (PPAP): As referenced in the AIAG PPAP manual. A predetermined set of documents/sample products from the supplier submitted to MX for final approval for all production materials, bulk materials.

Production Parts: Production parts are manufactured using production intended tooling, gauging, process, materials, environment, settings (pressures and cycle times), etc.

Repeatability: Repeatability is the variation in measurements obtained when one person takes multiple measurements using the same instrument and techniques on the same parts or items. In the gage analysis, it is the common cause, random variation resulting from successive trials under defined conditions of measurement. It is the within-system variation when the conditions of measurement are fixed and defined like a fixed part, instrument, standard and methods.

Reproducibility: The variation in average measurements obtained when two or more people measure the same parts or items using the same measuring technique. It is caused by normal conditions of change in the measurement process. In the application where a manual gage is used, the average of each operator is compared to the other operators using the same gauge and measurement system. Where an operator is not a major part of the gage such as in an automated system, then the value refers to the average variation between-systems or between-conditions of measurement.

Run at Rate: Verification that all production tooling is in place and operating at full production feeds and speeds, using all regular production direct and indirect personnel and support systems as quoted.

Stability: In a gage system, there are two types of stability, statistical and measurement stability. Statistical stability is a predictable, underlying measurement process operating within common cause variation or in-control. Measurement stability, or drift, addresses the necessary conformance to the measurement standard or reference over the operating life of the measurement system.

Statistical Process Control (SPC): As referenced in the AIAG SPC manual. The use of statistical tools, such as control charts, to analyze a process to determine if there are any special causes of variation which would make the process become unstable.

Supplier: Any organization or business entity that is contractually engaged in the supply of product and/or product related outsourced services to MX. A supplier may provide a part, component, subcomponent, subassembly, bulk material, product related outsourced service, etc.

16. Supplier General Requirements Agreement

We, the supplier, hereby acknowledge and confirm our receipt, review and agreement with the guidelines and requirements specified in the MX Global Supplier Requirements Manual.

Company: _____

Address: _____

Name: _____

Function: _____

Signature: _____

Date: _____

E-Mail: _____

MX Location Supplied: _____

Please send the signed copy to the responsible purchasing location.