

Procedure to regulate and control Compressor suppliers' changes for Honda North America components.

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APROBACIONES

	Título/ Posición	Área
Prep.	SQAP	Quality
Appr.	Manager	Quality

1.0 Purpose

- 1.1 *Regulate Serial production Supplier and Sub-supplier Changes for Honda Compressors at North America*

2.0 Scope:

This procedure will provide guide lines for Mahle suppliers on changes for North America Compressors components, by using Honda specific requirements described at Honda Supplier Quality Manual for North America, section of Change Point Control.

- 2.1 Over the life of a part or product, changes in design, specification or process will occur. Therefore Honda is asking to their suppliers and sub-suppliers to be in compliance with their change point control regulations described at their North America Supplier Quality Manual.
- 2.2 The Change Initial Production Parts IPP systems is used at Mahle to approve and/or track changes to parts or processes. When the IPP system is used correctly, Honda and suppliers have documented approval and accurate records of any change that occurs to parts or products.

The IPP system helps to ensure final product quality by providing a way to identify, approve and control change points. This control is necessary to safeguard the quality of finished products.

3.0 Responsibility

The supplier's quality department at the manufacturing plant is responsible for understanding the

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contents of any change and ensuring the change has no negative effect on the overall product quality.

3.1 Purchasing ,SQAP, SQP are responsible to communicate during the Technical Review the guidelines for the change described in this procedure.

4.0 Definitions:

SQP: Supplier Quality Production
SQAP: Supplier Quality Advance Projects
MCM: Mahle Compressor Mexico
IPP: Initial Production Parts
PPAP: Production Part Approval Process
Pool 4 Tool: Mahle Supplier Portal
PQ: Plant Quality
MP: Manufacturing Production
QAV: Quality Assurance Visit
SCRN: Supplier Change Request Notice
CMII: Configuration Based Management Change Process
NCN: Non technical Change
PSW: Part Submission Warrant

5.0 Procedure:

This process was made in conformance with the HSQM-0041 "Change Point Control" Rev. 04/01/2019

Change Point Control

Suppliers that need a change for any reason must submit a Supplier Change Request Notice format, to the buyer. This document can be find at MAHLE supplier portal.

Buyer will provide a NCN or CMII Number to officially initiate the change.

For Changes Affecting Multiple Compressor Plants:

Supplier must load a PPAP Document, into the Pool 4 Tool. Using the following guidelines, when processing PPAP for multiple plants:

1. Supplier must organize change point details in written format including process, materials, supply chain flow, tooling, equipment, etc.

2. Supplier must create a detailed confirmation plan prior to contacting MAHLE.

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3. Supplier must submit items 1 and 2 above with an invitation to a joint conference call / meeting with all affected plants.

a) This allows MAHLE to consider the change and have internal discussions as needed prior to finalizing requirements and PPAP submission.

b) Joint conference must establish a common set of SCRN requirements for change validation (testing, dimensional layout, etc.), risk mitigation (bank build), or other areas of common interest.

c) Supplier must submit PPAP request with a confirmation plan including items decided in the Technical Review Meeting.

4. Upon review of the official PPAP submission, Plant Quality will add any items needed to verify impact to the plant or special model characteristics (packaging, delivery methods, unique PO, Serial Number, fit assembly trials, etc.).

5. Supplier should fill out the Technical Review Mtg. to reflect consolidate information from the change. Supplier will load information in Pool 4 Tool.

6. PPAP Submission is required in conformance with the agreement with Supplier Quality at the Plant, during technical review. PPAP information should be loaded in Pool 4 Tool.

Applies To:

The IPP (Initial Production Parts) system applies to all Serial production parts, components and materials that are shipped to MAHLE, and are part of a finished product. This includes each North American Compressor facility and each Compressor foreign destination, that use the Same part number-Same Supplier.

Requirements

If a part is sent to more than one Mahle Compressor plant, additional PPAP submissions are required. The supplier must contact the Quality representative at each receiving plant to determine the requirement in each case. The supplier must receive approval from each plant.

“A” level changes: (see matrix) require approval in advance from Mahle and Honda. The PPAP is the means, used to obtain approval. A supplier suggestion change report and the Contract Review Meeting need to be filled out and attached to the PPAP on the Attachment tab as a task in Pool 4 Tool in order for the PPAP to be approved. This information ensures that a Quality Representative from the plant or equivalent associate has reviewed all of the quality characteristics, parts inspection criteria, part approval, chemical substances, etc... and have evaluated the change point(s), and declared that the changed parts meet all of the quality requirements, as well as all Honda requirements.

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IPP Control Levels

There are three levels of control in the IPP process. They are listed in the table below. If you are unsure which level to use, contact your quality representative.

Control Level	Procedure	Control Method
A - PPAP	<ul style="list-style-type: none"> The supplier initiating the change must obtain PPAP approval prior to use in MP (use the approved PASR number) for the Initial Production Parts Quality Assurance Supplier Change request form must be attached to the PPAP. An IPP tag must accompany the first IPP parts for MP and the parts must be properly labeled. Note: CIPP tags must apply to the first shipment that goes directly to Mahle production. Do not send CIPP tags with in-process parts. 	<ul style="list-style-type: none"> Delivery of IPP parts must be done according to FIFO The supplier must keep the following information: <ul style="list-style-type: none"> Date of IPP SCRNs and PASR number Date of delivery (serial number) Quality information data such as inspection or testing data, if not attached to the PPAP (all this information must be loaded in Pool 4 Tool)
B – IPP Tag Note: B level changes do not require a PPAP unless instructed by Mahle Honda	Note: CIPP tags must be applied to the first shipment that goes directly to Mahle production. Do not send IPP tags with in-process parts	Same steps as level A
C- Supplier	Internal at the supplier	The supplier tracks these changes. Information is made Mahle upon request

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Use the following table to help determine the correct control level

Types of Changes

It is necessary to issue IPP tags when there are changes to parts or processes that make those parts. The table below explains each change type, lists some example changes (change type not limited to examples), and how to determine the level of control (A, B or C).

Note - a change in a part due to one of the listed types requires control of the first lot, whether the change originates internally or externally to the supplier.

No	Item	Explanation/Examples	A	B	C
1	Design Change	The part drawing changes, altering the physical structure of the part. A design change is done when a new part drawing or an M/I is issued. <ul style="list-style-type: none"> • New part design • Design change that affects the part 	X		
		<ul style="list-style-type: none"> • Design change that does not affect the physical structure of the part, such as part name or part number 			X
2	New Supplier	A supplier or sub-supplier, who has never produced the part or component, begins manufacturing the part for Honda. <ul style="list-style-type: none"> • Addition of a new supplier or sub-supplier • Changing the supplier or sub-supplier • New delivery location • Change from in-house production to outside supplier (or vice versa) • Change in factory location • Substances of Concern (SOC) as per the SOC (IMDS) 	X		
3	Material Change	The material(s) used to manufacture the part is changed. <ul style="list-style-type: none"> • Change of material supplier • Material supplier changed from outside to self-supplied (or vice versa) • Change in material composition (including anti-rust oil or lubrication oil.) • Substances of Concern (SOC) – IMDS 	X		

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No	Item	Explanation/Examples	A	B	C
4	Manufacturing Method Change	<p>A process method, setting or condition used in manufacturing the part is changed or modified. This includes any change that effects the way the parts are produced as reflected in the PCP (Process Control Plan). This applies when the normal control range changes, not for routine adjustments.</p> <ul style="list-style-type: none"> • Casting or forging method change • Sintering condition change • Heat treatment condition change • Rubber or plastic molding condition change • Welding condition change • Plating or coating condition change • Machining or cutting condition change • Process standards or setting method change • Associate change on a critical process 	Mahle Quality Rep. to Set level		
5	Process Order Change	<p>The manufacturing process order is changed or deviates from the PROCESS CONTROL PLAN.</p> <ul style="list-style-type: none"> • Change to the order of the process, or adding or deleting process steps • Change a temporary process to a permanent one (or vice versa) <p>Note: If the PPAP process cannot be completed before parts are to be shipped (e.g. a welding robot breaks down and the process is done by hand) contact SQP immediately will provide instructions and requirements to suppliers in this situation</p>	Mahle Quality Rep. to Set Level		

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No	Item	Explanation/Examples	A	B	C
6	Machine Change	<p>When the machine initially used to produce the parts during the approval process has been changed or replaced by another machine. (Machine examples: stamping press, assembly line, injection or blow molding, forge press, etc.)</p> <ul style="list-style-type: none"> • Initial use of a new machine • Major modification or repair of a machine • Minor modification or repair of a machine • Equipment relocation within the same plant • Equipment relocation outside plant or building • Changes to machine control logic (e.g. software upgrade or replacement that affects machine function) 	Mahle Quality Rep. to Set Level		
7	Jig/Tool Change	<p>The primary or secondary tooling or jigs are changed potentially affecting the quality, function, appearance or reliability of the part. (Jig and tool examples: welding or assembly fixtures used in manufacturing process, cooling fixtures, sonic or heat welding, etc.)</p> <ul style="list-style-type: none"> • Change in machining master for camshaft or pistons • Change in machining master for other parts • New or modified jigs and tools 	Mahle Quality Rep. to Set Level		
8	Die/Mold Change	<p>A die or mold that is used in the manufacturing process is new or changed</p> <ul style="list-style-type: none"> • New or renewed die or mold • Revision or repair of the die or mold 	Mahle Quality Rep. to Set Level		

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No	Item	Explanation/Example	A	B	C
9	Inspection Method Change	<p>The inspection methods of the part are changed, potentially resulting in either an improvement or changes the part's quality performance. This may require a revision to the Process Control Plan (PCP).</p> <ul style="list-style-type: none"> • New or modified inspection equipment • Measuring method change or measuring instrument type change 	Mahle Quality Rep. to Set Level		
10	Transportation/Packaging Change	<p>The method of transporting the part to Mahle, or the packaging of the part deviates from the initially approved method. The change could adversely affect the quality of the part.</p> <ul style="list-style-type: none"> • Change in delivery method, packaging materials or containers 		X	
11	Use at Mahle direction only	<p>If directed to sort parts use the Mahle authorization number provide by SQP from each plant.</p>	N/A		
		<p>An IPP tag may be requested if a sort is deemed critical.</p>		X	
		<p>For all other instances, enter a detailed description in the how changed area on the IPP Tag.</p>		X	
12	Weight Change	Substances of concern (SOC) as per the IMDS	X		
13	Tariff	The product source and/or source of materials included in the make-up of the product are changing as result of Tariff laws.	X		

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Note: A completed, approved PPAP-PSW form is required for all "A" level changes prior to shipment of the changed part. All PPAPs Parts must have an Supplier suggestion Change Request. All "A" level changes also require an IPP tag on the first production shipment to Mahle.

Confirm Change The supplier confirms the first lot conforms to all quality requirements before shipping. Confirmation data is retained by the supplier and may be required to be included with the first lot.

Identify the First Lot tags The supplier identifies the first lot shipment with properly completed IPP shipments to multiple locations require an IPP tag for each Mahle plant and production line. Parts of different colors require an IPP tag for each color. Suppliers must ensure that part/process changes are PPAPs for all Mahle destinations.

Attach IPP Tag The supplier prepares the first lot for shipment by attaching a properly completed IPP tag in a conspicuous location. The first lot is shipped in FIFO order.
Note: The IPP Tag must be printed on the canary yellow paper provided by Mahle. Label can be download from Pool 4 Tool

Label the First Lot

The supplier clearly labels containers holding the first lot. Suppliers are required to use the labels described on the next page.

Containers are labeled on the outside to show an IPP tag is enclosed. When a shipment contains both the first lot and older parts, all the containers in the shipment are labeled to indicate whether they contain old or new parts.

IPP Labels

There are three IPP related labels. The table below describes each label.

Note – Each label type is also available.

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Label Color	Label Type	Label Use
Pink	IPP Enclosed In/On This Container	To place on any container that holds an IPP tag
Green	New Style Parts	To place on all containers, in the IPP shipment, that are new style parts
Blue	Old Style Parts	To place on all containers, in the IPP shipment, that are old style parts

New Model Trial Events

- Do not send IPP tags for new model trial events
- IPP tags are for saleable units only, when parts have changed
- Each project schedule identifies when saleable units begin
- Each project dictates how trial event parts are marked

Label Attachment

Follow these guidelines when attaching labels to containers.

- Wrap labels around opposite corners so they can be seen from all sides
- Do not cover any other labels with the IPP related labels (e.g. part number or bar codes)



Labels wrapped around corner

IPP Notification via ASN

Suppliers must notify Mahle concerning each shipment containing IPP related parts. The supplier must enter the IPP Tag number and the reason code and SCR Number into the ASN.

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For ASN information please refer to the "EDI or contact your PC&L contact"

For sorted parts use the authorization number in the IPP Tag number field and reason

NCN or CMII Number – PPAP-PSW Purpose

The PPAP-PSW form is used when a change requires advance approval from Mahle prior to the supplier shipping the part for manufacturing parts.

Note: NM event part changes do not require an IPP unless those units are saleable.

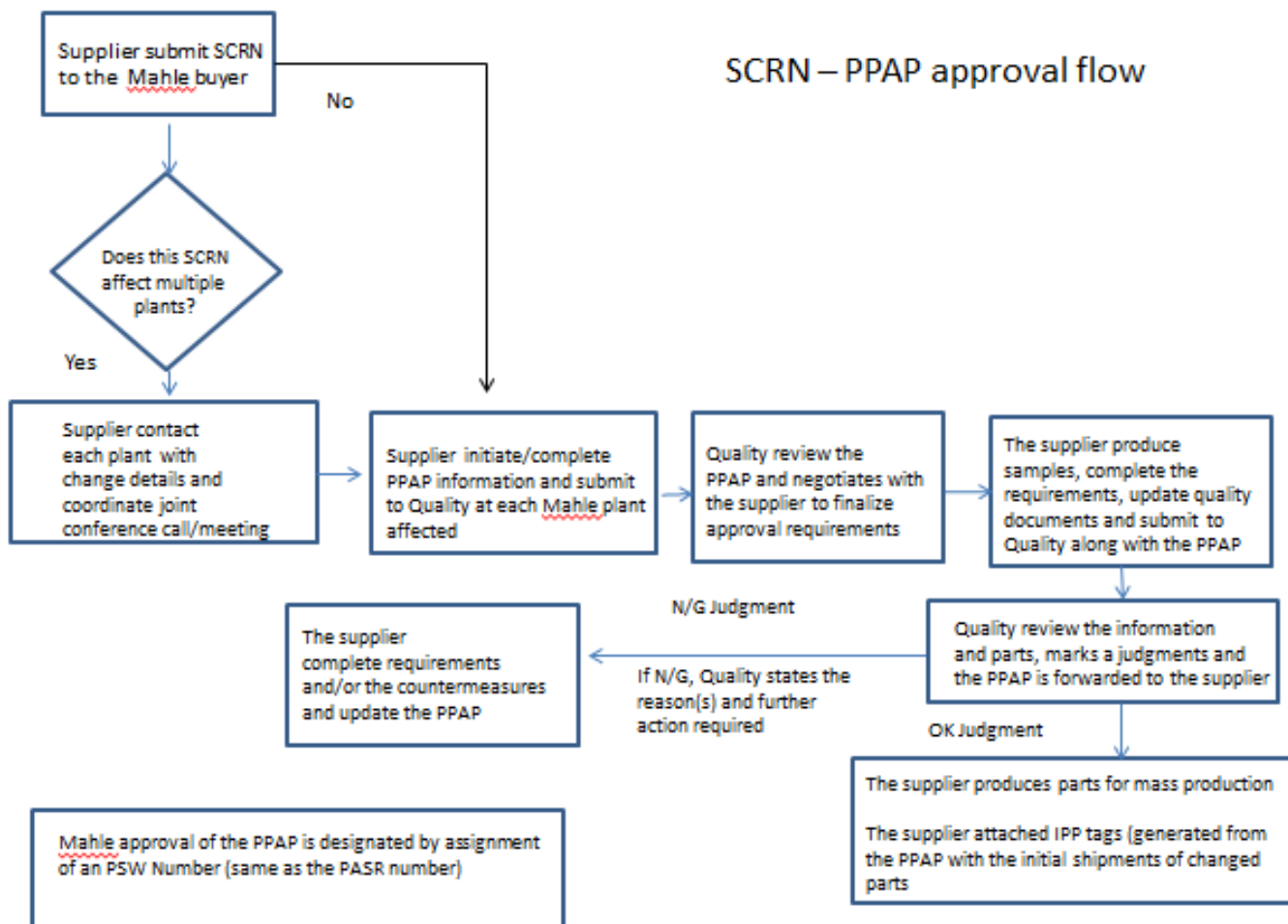
If a part is sent to more than one Mahle plant, additional PPAP-PSW approvals are required. The supplier must contact the Quality representative at each receiving plant to determine the requirement(s) in each case. The supplier must receive approval from each plant.

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PPAP Flow

The chart below shows the PPAP flow



When the PPAP is loaded in Pool 4 Tool. SQP will create in Pool 4 Tool a task to complete IPP (Initial Production Part Label) in the system. This label will have designate, NCN (non technical change) or CMII (Change Model) number.

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Do not use those PPAPs-PSW connected Initial Parts tags for mass production line trials. Suppliers must create separate IPP (initial Production) tags for mass production line trials, indicating the appropriate PPAP-PSW number.

Tracking Number. Use the PPAP connected IPP tags with the initial mass production shipment.

All supplier issued PPAP-PSW and IPP Tags are created in the Change Point Control System

PPAP Advance Planning

The supplier is responsible to create a quality confirmation plan and schedule to verify the change (may include testing, document revision, identifying time constraints, etc.). The schedule outlines all activities needed to implement the change. For example, when test parts will be available, when the dimensional confirmation will take place, when any outside testing will be performed and completed, etc.

Important notes for Initial PPAP Planning

- The supplier is responsible to contact the Mahle SQP and Logistic department, and together set the target shipment/delivery date. Mahle quality and purchasing work with the supplier to set dates (lead-time).
- If the date will not be met, the supplier is responsible to contact Mahle.
- The supplier is responsible to review the plan with Mahle representatives so Mahle input can be integrated into the plan (this will reduce last minute additional requests).
- The supplier is responsible to submit the completed PPAP, confirmation plan and schedule as soon as possible. The Initial Process Control Plan as well as the Quality Assurance Declaration-GP-12 must be attached to ensure the Companies OEM Company / Facility QA Representative or equivalent has reviewed the changes and ensures that the changed parts meet all of the quality requirements.
- If the Initial PPAP process cannot be completed before parts are to be shipped (e.g. a welding robot breaks down and the process is done by hand) contact Quality immediately. Quality will provide instructions and requirements to suppliers in this situation.

Fulfilling Initial PPAP Requirements

There are two items the supplier needs to keep in mind while working towards fulfilling the initial Parts – PPAP requirements:

- The period of confirmation could range from a week to months depending on the confirmation items.

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- While implementing the change, the supplier is required to maintain stable production and consistent quality for current MP parts.

PPAP Supporting Documents

The PPAP submittal may include any or all of the following:

- Capability study (number determined by Mahle)
- Sample parts (number determined by Mahle)
- Material testing, if applicable.
- Characteristic testing, if applicable.
- Any documentation that needs updated
- Information from the supplier showing the changed part meets all quality requirements and is fit for use, including a summary of confirmation activities and results.
- Other information as requested by Mahle (e.g. layout or complete dimensional data) will be request by Pool 4 Tool as an additional task.

The PPAP submittal must have an Initial Production Parts Quality Assurance Declaration – PCP and GP-12 attached prior to the PPAP being approved.

Mahle Approval

When the supplier submits the PPAP and related materials for approval

- Mahle reviews the PPAP documents to determine if other confirmation items are needed, such as a QAV or additional testing.
- Mahle and Honda evaluates the PPAP and IPPAAR (as Honda nomenclature) results and sample parts. Honda's decision is entered into the system.
- Once all requirements have been met, and approval given, the supplier is permitted to ship the initial production parts (MP).

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Important Notes

Key Points

- If changed parts that require advance approval are shipped without that approval, those parts may be rejected and/or counted against the supplier's index rating. Rejecting or indexing may occur whether or not an IPP tag was sent.
- MP parts are not to be shipped until the supplier receives the approved PPAP-PSW or other formal part approval (e.g. QAN used at NM timing). If the supplier has not received approval and MP shipment delay is possible, the supplier is responsible to contact the Mahle supplier representative immediately.
- An approved PPAP-PSW has an PPAP Number.

PPAP Timing

The PPAP is sent with appropriate lead-time prior to delivery of the first lot. If Production Quality or Product Engineer requires a check or testing of the part, the supplier needs to submit the PPAP early enough to allow sufficient time for processing.

6.0 Document Controls

N/A

7.0 References

- 7.1 North American HSQM last revision
- 7.2 C-CPR 3.8.1 Configuration management (CMII based)
- 7.3 MBMS 01005822 Supplier Quality Management Book
- 7.4 MBMS 02251735 Non Technical Change Notice (NCN)