



THE PLEX SMART MANUFACTURING PLATFORM

SUPPORT FOR HONDA SUPPLY CHAIN REQUIREMENTS

You are a supplier to one of the most revered manufacturing companies in the world, known for impeccable quality and operational efficiency. What comes with being a part of that rare group of companies is a set of high expectations from Honda of its suppliers. From the moment new business is awarded through end of production and service part programs, Honda sets the bar high with a set of core manufacturing principles and supplier requirements.

The good news is that Honda prioritizes supplier success as a priority in the relationship with their suppliers, and they provide a great deal of support in ensuring that success. Honda is governed by a set of core manufacturing principles, which Plex addresses.

CORE MANUFACTURING PRINCIPLES

Kanban

As products flow through the manufacturing process, inventory is updated in real time with Plex's electronic Kanban system. This allows for Honda Kanban principles to be followed more closely since there is no lag between when a Kanban card is used and when it is returned to the rack.

Jidoka

Plex originated as a quality system, and at the core of that quality system is the use of control plans and in-process inspections. Reaction plans are built into each one of these inspections so that the necessary team members are notified, and corrective action is taken to prevent the issue from continuing.

Kaizen (Continuous Improvement)

Using Plex's patented production control panel, operators are given full visibility of what their production targets and objectives are. It also has a full suggestion system which utilizes the Kaizen philosophy, putting more responsibility on the operators and allowing them to offer up improvements directly from the line. These suggestions are then automatically sent to their superiors for review. Plex also supports three key supplier requirements and a set of minimum quality feature requirements to ensure Honda supply chain success:

1. L-MPR: Labeling–Minimum Process Requirement

Honda developed its Labeling-Minimum Process Requirements (L-MPRs) to help its suppliers consistently achieve 100 percent accuracy in their processes for packing, labeling, shipping, and traceability of Honda products. The key to meeting Honda MPRs is adopting line-side processes with built-in controls that can prevent errors in real time.

There are many ways for a supplier to meet these requirements using Plex:

Shop Floor Control

- Real-time machine integration to supply accurate part number data and counts.
- Vision sensors to identify, count and verify parts; determine good vs. scrap; verify kitting; validate tools/dies.
- Tool validation to ensure correct tool is being used in the machine.

Production Control

- Automatic label generation from production activities (work in process and finished goods).
- Weigh scales ensure accurate dunnage.
- Control of non-standard packs (small lots) at end of run/end of shift.



HONDA SUPPLIER REQUIREMENTS

Inventory Control

- Container serialization provides accurate inventory tracking, shipping, traceability.
- Automatic part verification during pack/repack operations.
- Part serialization controls piece counts, rework and repack; enables serialized traceability.

Operator Control

- Accurate production information is displayed to operators in real time.
- Full operator accountability maintained during the entire production process.
- Touchscreens are supported to display part number data and images; enable adjustments at packing, rework, etc.

2. Line-Side Labeling

Honda requires all parts being produced be labeled at the time of finished goods production. Honda requires that the labels be:

- Printed at the production line or in the work cell, using real-time data from the ERP system.
- Printed on-demand, not batch-printed in advance.

- Applied immediately as the containers are packed. Honda wants to eliminate the problem of receiving mis-labeled parts from its suppliers but doesn't want to waste time or increase its labor cost to inspect every part it receives. Honda now requires its suppliers to adopt a line-side labeling process.

3. IPP Tags

Honda wants to be alerted when they are getting their first shipment of parts that have gone through some sort of engineering change, and uses Initial Parts Production (IPP). Suppliers obtain a unique IPP number via the Honda web portal prior to shipment. The supplier is required to attach a clearly visible colored document to each container with this number on it. Plex supports this requirement natively.

Honda's Minimum Systems Requirements

Honda requires all suppliers to meet a base set of requirements in their procedures and processes. Plex meets these requirements as shown below.

Honda SQM Requirement	Plex Capability	✓
Corrective Action System	Corrective action system fully integrated with problem control (8D) and ERP data	
Operations Standards, Training and Process Job Qualifications	Control plans (PQCT), checksheets, document control	
	Training & skills matrix, operator validation for machine training	
	Part and process control	
Process Control	PFMEA fully integrated with control plans (PQCT) and checksheets	
Change Point Control	Parts, engineering change request, program management	
Supplier Management	Supplier list, supplier audit, problem control, document control system, supplier ppap, supplier scorecards	
	Supplier RFQ	
Supplier Management Inspection, Test & Calibration	Control plans, checksheets	
	Gage control integrated with checksheet	
Suspect & Non-conforming Parts and Abnormal Process	Real-time container tracking, rejection tracking	
	Problem control integrated with deviation tracking	
	Deviation tracking integrated with checksheets	
Organization	Compliance module, document control system, workflow	
Quality Systems & Policies	Customer PPM, internal PPM, supplier PPM problem control (8D), supplier returns, customer returns	
Preventive Maintenance	PM maintenance, MRO supplies, tooling management, tool tracking	
Lot Control & Traceability	Control panel, serialized inventory management	
	Heat management	
	Lot control	