Supplier Sequenced and Kitted Container Requirements

This Document will define the Harley-Davidson process and requirements for supplier sequenced (SEQ) and kitted (MLT) containers. The requirements are common across the York and Kansas City manufacturing sites. Supplier compliance with multiple parts per container (MPPC) is crucial to product identification, material handling efficiency, and inventory accuracy.

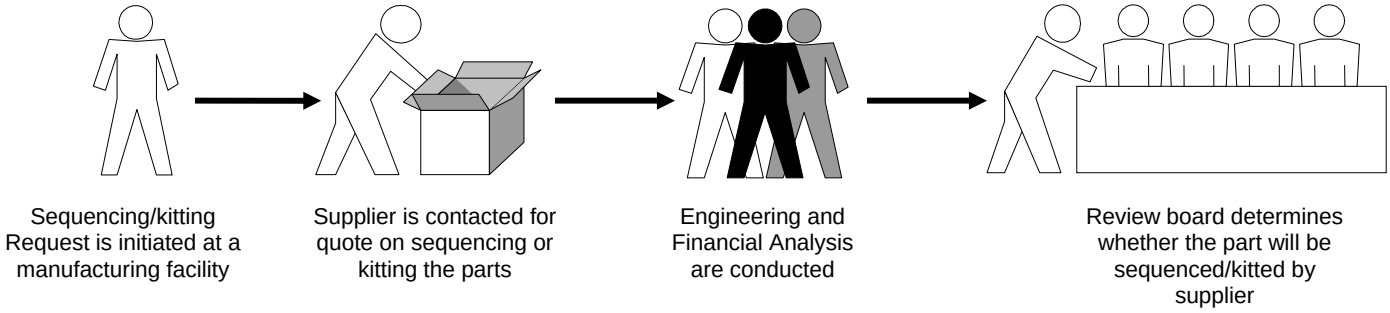
Table of contents

Background Information

Before 2005 Harley-Davidson Motor Company did not have a clear process for the handling of supplier sequenced (SEQ) or kitted (MLT) containers. Due to the increasing number of parts being purchased in kits or in sequence for production, Harley-Davidson determined there was a need for a systematic approach to the material handling process for MPPC. In 2005 Harley-Davidson made an enhancement to its Enterprise Materials System (EMS) in order to better accommodate the material handling requirements of supplier sequenced and kitted parts.

Reasons for Supplier Sequencing Requests

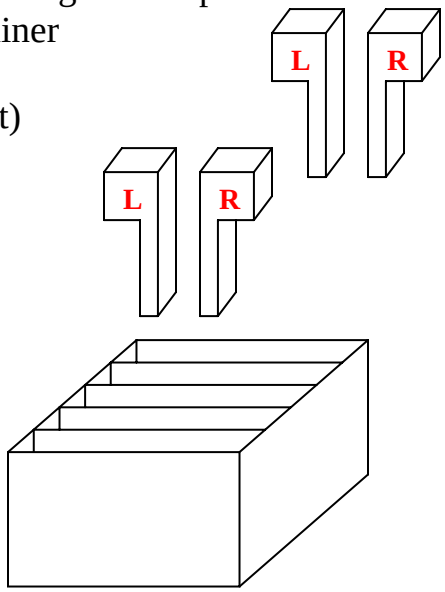
- **Supplier Sequencing Request Process**



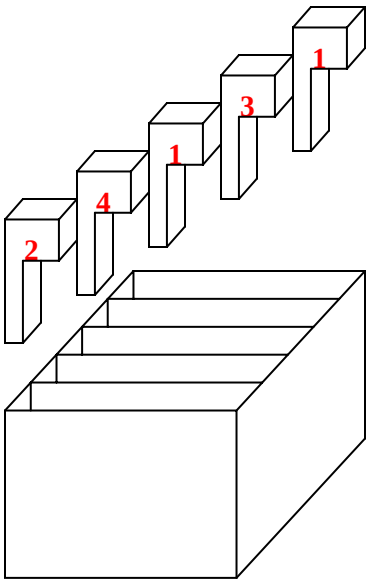
- **Benefits of the Multiple Parts Per Container (MPPC) Functionality**
  - MPPC can be processed, stored, and managed through the Material Velocity Center (MVC)
  - No exception processes needed for processing SEQ or MLT containers
  - Reduce occurrence of inventory adjustments for MPPC parts
  - Eliminate the need for unscheduled cycle counts on MPPC parts
  - Readiness for future increased utilization of SEQ & MLT material

Differences between SEQ and MLT Containers

- **Kitted "MLT" Group Codes**
  - Multiple parts in one container
  - A kit of parts that are used together in production
  - The contents of the container have a fixed relationship (ie…always 1 left, 1 right)

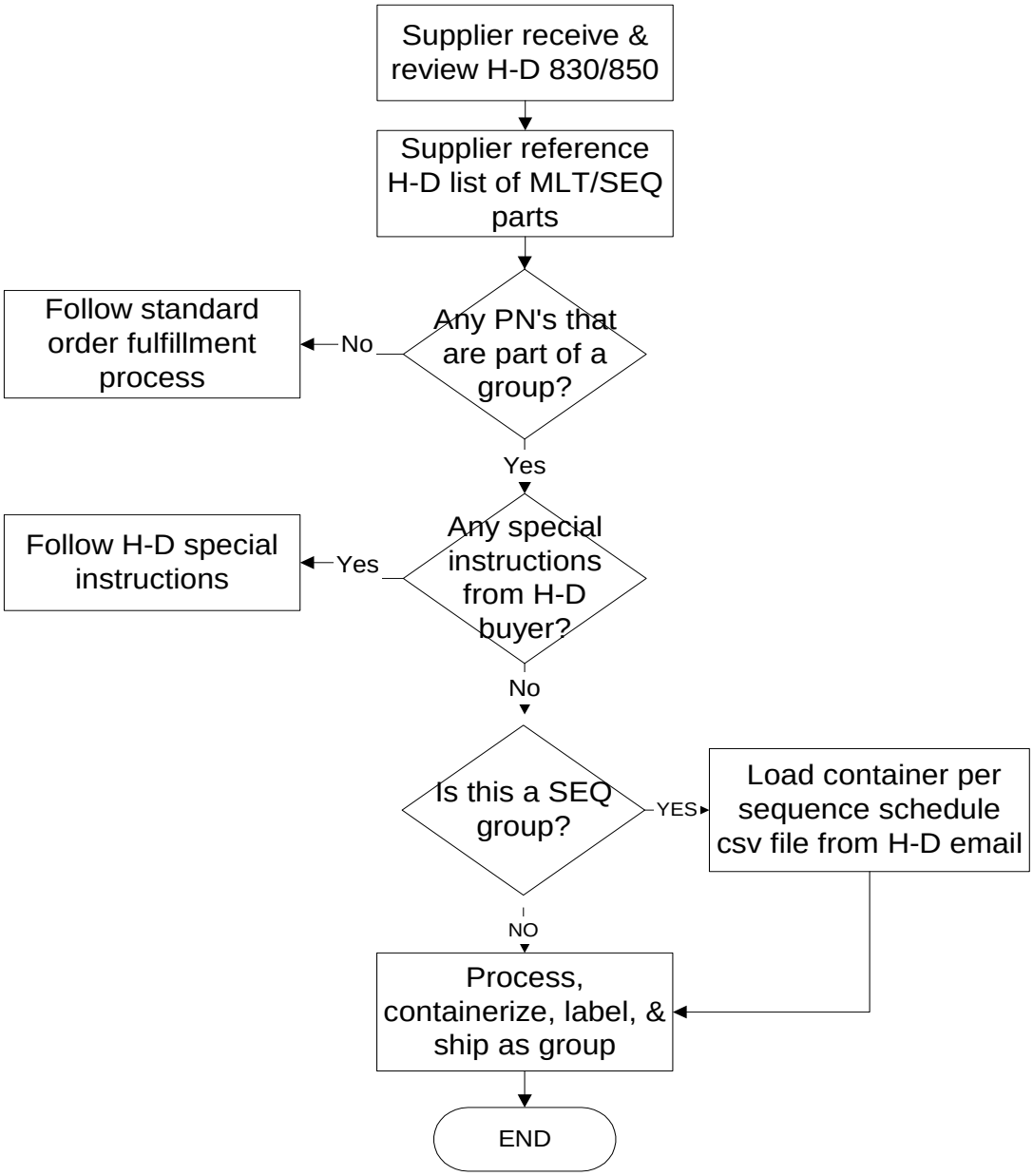


- **Sequenced "SEQ" Group Codes**
  - Multiple part numbers packaged in order of production (sequenced)
  - Supplier packages parts per the specified order from the H-D production schedule
  - Each container has a unique combination and sequence of parts
  - Production date & sequence range will be used for FIFO in EMS



Supplier Implementation Process for Multiple Parts per Container

- Manually monitor incoming H-D requirements
- Recognize which parts are grouped
- Containerize, label, & ship as the group code
- Apply group label
- Individual part number labels are still required for each part number



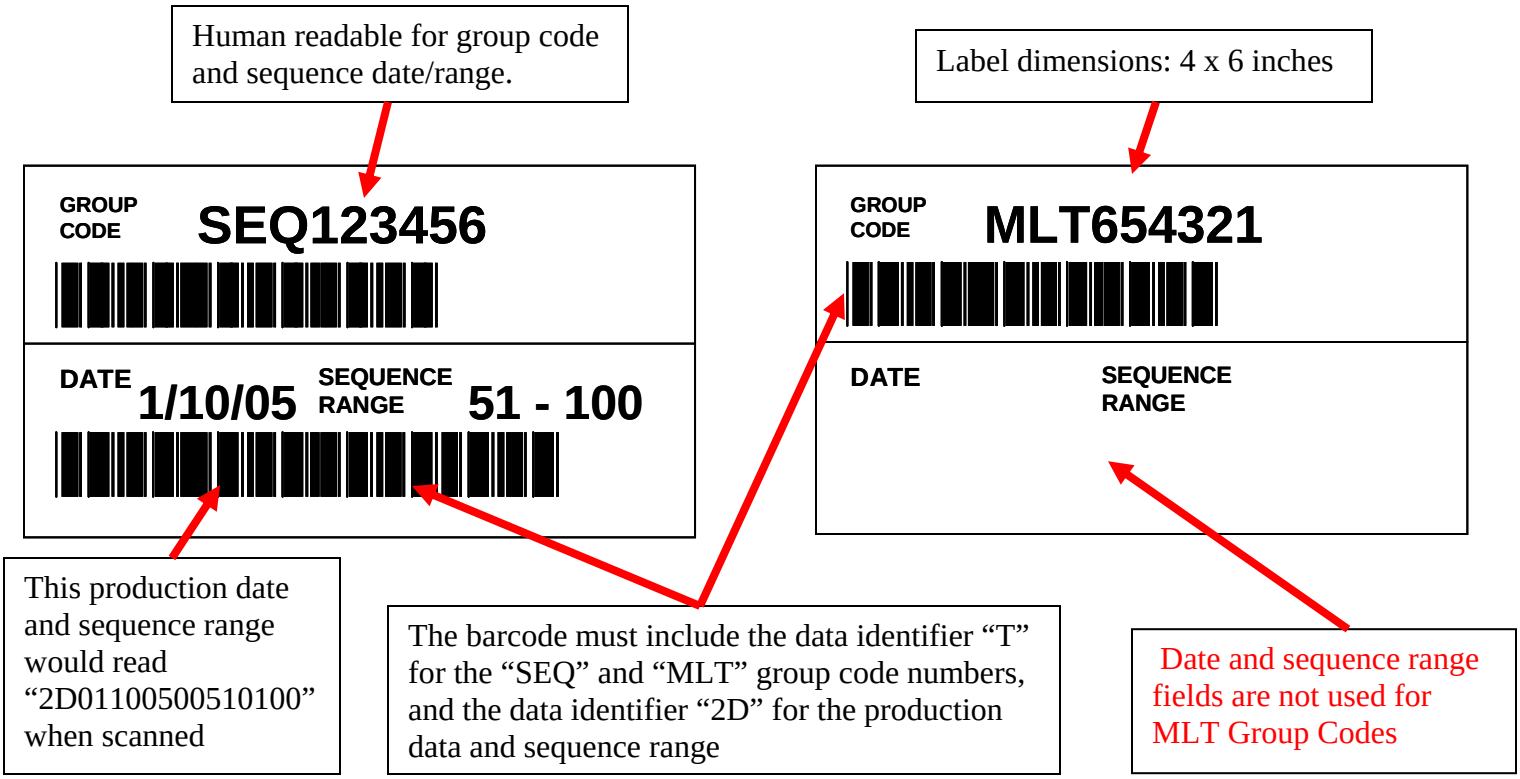
Multiple Parts Per Container Supplier Check List	
1. Request for sequenced/kitted commodities from Harley-Davidson	
2. The Harley-Davidson Supplier Network document on MPPC has been read	
3. Packaging for the sequenced commodity has been coordinated	
4. Start date has been discussed with Harley-Davidson and approved	
5. Part numbers and Group Code have been communicated and verified	
6. Labels have been created, tested, and approved by Harley-Davidson	
7. An email address has been provided to Harley-Davidson for sending the schedule	
8. Schedule has been received	
9. First shipment was packed, labeled, and shipped correctly	

Group Code Label Requirements

- **General Group Code Label Requirements**
  - Fixed length field of 9 characters
  - 3 characters for group type “MLT” or “SEQ”
  - 6 character alphanumeric
  - Example: MLT123456 or SEQ123456
  - The data identifier on the bar code is “T”

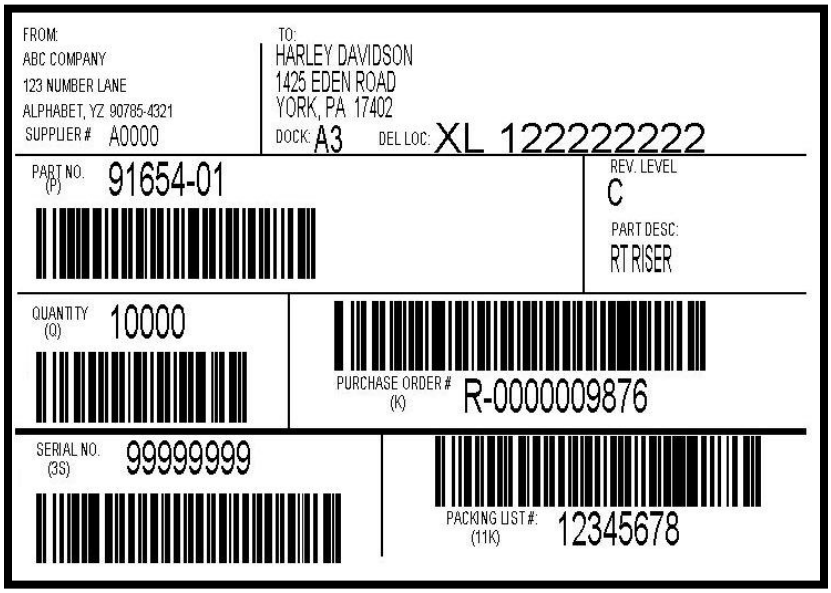
- **SEQ Group Code Label Requirements**
  - Must have production date & sequence range on label
  - One scan - fixed length field of 14 characters
  - Example: MMDDYYAAAAZZZZ
  - Date MMDDYY,
  - Starting sequence number AAAA
  - Ending sequence Number ZZZZ
  - Data identifier on the bar code is “2D”

- **MLT Group Code Label Requirements**
  - Date and sequence range fields are not used



Part Number Label Requirements

- In addition to the group code label, there must be an H-D container label for each PN in that container
- If an SEQ container includes part numbers with a quantity of zero for a particular date and sequence range the individual part number label is not required



For questions on labeling individual part numbers please consult HDSN under the topic Bar Coding Requirements

Label Specifications

- **Label specifications are crucial to Harley-Davidson processes. No exceptions to specifications are allowed (i.e. no additional spaces, or missing characters)**
- Industry Standard is the Automotive Industry Action Group (AIAG)
- "X" Dimension shall be in the range of 0.33 mm (0.013 inch) to 0.43 mm (0.017 inch)
- Bar code height shall be a minimum of 13 mm (0.5 inch)
- Quiet zone (blanks space at each end of bar code) shall be a minimum of 6.3 mm (0.25 inch).
- Bar code shall meet a minimum ANSI print quality grade of "C"
- Human readable data must be 0.25 inches or 20 points or 3 LPB
- Row/Block height must be 1 inch tall

Harley-Davidson requests that suppliers remove all labels left on containers after they are returned.

ASN Compliance

- **There is no change to invoicing and ASN transmission process from standard part numbers**
- The parts of the group must be on the same PO to the supplier
- If the grouped parts & other non-grouped parts are on the same PO, it is not necessary to separate the MPPC parts onto its own PO
- Group code info will not be in the EDI transaction
- Whenever Harley-Davidson receives, gathers requirements, picks, or stores these parts, the transactions will be recorded against the component parts. The Group Code simply enables us to consistently process the parts as a group.
- If parts need to be purchased individually, the supplier will be notified with special instructions
- **ASN compliance is critical to the H-D receiving process**

NCM Process

- Non-Conforming Material (NCM) process if one part in an SEQ or MLT group is rejected:
  - Entire container may be returned to the supplier
    Or
  - NCM and Damaged parts can be dealt with on a case-by-case basis. Examples:
    - H-D may disposition the inventory to meet the needs of the business
    - It might be decided to manage the inventory at line side
    - Single replacement parts may be ordered
    - An SCA or SCS may decide that a buffer of certain part numbers should be kept in inventory. In this case the supplier will be contacted in person.
    - The H-D SCA or SCS will contact the supplier in the case of damaged or non-conforming material.

FAQ's and other Information

1. We are receiving out of balance triggers for our parts with the H-D group codes, what should we do?
   a. Contact the Harley-Davidson SCA or SCS and they will help rectify issues with out of balance triggers.

2. Should the multiple labels be stuck to the container or placed in a pouch attached to the container?
   a. Harley-Davidson prefers that labels are put into pouches whenever possible.

3. We are not getting enough dunnage back from H-D to support our Work-In-Progress. Does Harley-Davidson supply returnable containers for the WIP?
   a. No, Harley-Davidson does not currently supply containers for Work-in-Progress on supplier sequence parts. Please contact your SCS or SCA if you are having problems with packaging and they will attempt to help resolve the issue.

4. We are not able to ship an equal number of parts for the kits, or we can not ship an entire sequence date and range, what should we do?
    a. If supplier cannot fill the group requirements, contact SCA for instructions and to determine the best course of action, example:

        H-D expects group MLT984376, 50 LHPN 50 RHPN
        Supplier can only ship 50 LHPN and 32 RHPN

    Option 1: Hold shipment until all PN's available
    Option 2: Ship the 50 & 32 parts, but do not put a group code label on the container
    Option 3: Send as a group with 32 of each

5. What does a sequencing schedule look like?
    a. Example scheduling document:

Plant	Line	Platform Code	Production Date	Model	Dest	Color	Sequence Number	Part Number	Part Rev	Part Effectivity Date
Y	6	YST	11/28/2006	07 FLSTC	DOMESTIC	BLACK	1	45915-07	A	2/17/2006
Y	6	YST	11/28/2006	07 FLSTC	DOMESTIC	BLACK	1	45916-07	A	2/17/2006
Y	6	YST	11/28/2006	07 FXST	DOMESTIC	BLACK	2	46004-07	A	10/4/2005
Y	6	YST	11/28/2006	07 FXST	DOMESTIC	BLACK	2	46006-07	A	10/4/2005
Y	6	YST	11/28/2006	07 FLSTN	DOMESTIC	WHT GOLD/	3	45915-07	A	8/27/2005
Y	6	YST	11/28/2006	07 FLSTN	DOMESTIC	WHT GOLD/	3	45916-07	A	11/1/2005
Y	6	YST	11/28/2006	07 FLSTF	DOMESTIC	BLACK	4	48717-07A	1	8/11/2006
Y	6	YST	11/28/2006	07 FLSTF	DOMESTIC	BLACK	4	48720-07A	1	8/11/2006
Y	6	YST	11/28/2006	07 FLSTC	DOMESTIC	BLACK CHE	5	45915-07	A	2/17/2006
Y	6	YST	11/28/2006	07 FLSTC	DOMESTIC	BLACK CHE	5	45916-07	A	2/17/2006

Harley-Davidson Implementation RASIC Chart

R - Responsible for ultimate delivery and execution A - Approves the course of action S - Supports the task w/resource, time, other mat'l benefit I - Input to the task, not a critical contribution. C - Consults on an ad hoc "as required" basis	SCA / SCS	CI Engineer	Materials Supervisor	Operations Planner	Assembly Engineers	Packaging Engineer	Inventory Control	Hourly Material Handler	Supplier
Activity									
Define									
Verify that part numbers of group exist in ASI system.	R								
Evaluate packaging for storage at MVC. (Standard pack qty, order multiples, & assy. line delivery (pallet or box) must be determined)	S	R			I	S			
Populate DIM (ASI) part maint. file pack quantity	A	A			A	R		A	
Set-up/adjust proper pack quantity for group (NOTE: This impacts pull triggers to suppliers)	S	R			I	C			I
Communicate packaging design changes (from packaging change team participation) & make appropriate changes to EMS.	A	R	A	S	A	A			
Communicate group request (part list, pack quantity, Descr, MLT or SEQ, container size, qty to be stored at MVC, pallet stack)	R*	R*	R*		R*	R*			
Evaluate MVC slotting alternatives, determine zone/aisle		S		R					
Group Set-Up									
Set up group in EMS, notify requestor of group code.		S		R					
Communicate group code and process requirements to supplier.	R								I
PO's to suppliers must have all the grouped parts on the same PO.	R								C
Communicate timing & cutover date for part to group change.	R	S	S	S	S		S		S
Set up PLS attributes for the group - Min/Max & Location.		S			R				
Set up PLS attributes for the group - container & pack quantity.						R			
In PLS, de-activate EMS fulfillment method for parts, set up group for EMS fulfillment method. Set the part up on an EMS route.		S		R					
Set up In-Sequence and schedule to be automatically sent to the supplier	R	S	C	C					R
Validate supplier group label for compliance	R								R
Transition									
Verify group label is on incoming containers (in addition to part labels)	R	C		S					R
Based upon cut-over date from SKU's to group:									
Convert existing part inventory to group inventory (if applicable)				S			R		
Oversee new process for group, ensure the group label is used for all inventory transactions in EMS.	S	S	S	S					