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1. INTRODUCTION

Hydraulex is committed to providing the highest quality products to its customers. As an international hydraulics part supplier, it is imperative that all Hydraulex suppliers recognize their role in achieving this goal and only those suppliers willing to make the same commitment will be considered for a potential relationship.

2. PURPOSE

Hydraulex provides this manual with the minimum requirements toward establishing and maintaining a supplier relationship. All suppliers are expected to have a management system comparable to the minimum requirements of ISO9001 and other applicable industry and OEM standards; however, there are additional requirements and processes that this document will provide that are specific to Hydraulex. Those requirements and processes shall be adhered to at all times.

3. SCOPE

The requirements on this manual do not supersede the directives included in the “Terms and Conditions for Hydraulex Purchase Orders” but instead work as a complement to some of the clauses.

This manual applies only to those suppliers whose products/services affect final product quality and/or end customer requirements. These suppliers include, but are not limited to the following:

- Component/Parts (e.g. casting, machined, plastics),
- Assemblies (e.g. built valves, pumps),
- Heat Treatment,
- Plating/Coating,
- Adhesive/Sealant/Patch Suppliers.

4. GENERAL REQUIREMENTS

Hydraulex has established several preliminary requirements that all suppliers must maintain or pursue to be considered eligible to develop business a relationship.

- **Confidentiality:** According to the directives established in the section 11 of the “Terms and Conditions for Hydraulex Purchase Orders”.
- **Commitment:** Potential suppliers will only be considered if they can commit to the lifetime of a project unless otherwise expressed by the purchase order.
- **Access:** Hydraulex will have access to all manufacturing areas associated with the product or service provided by the supplier unless a proprietary process or patented technology prohibits.
- **Technical Support:** Suppliers shall support part/component development and ongoing program technical issues, this also includes meetings/visits with Hydraulex customers if required.
- **Contact:** Supplier must designate a quality contact who is available all working days.
- **Quality Management System:** Suppliers shall maintain a quality management system that is comparable with the minimum requirements of the ongoing version of ISO9001.

5. APQP

When suppliers are invited to take part into the Advanced Product Quality Planning (APQP) to develop a new product, a cross-functional team is expected to support to the development process. Lean manufacturing, Kaizen, Six Sigma, Error proofing, and 5S are examples of disciplines that should be considered during APQP.

6. PPAP

As a supplier for Hydraulex, all suppliers must conform to the PPAP guidelines provided below. This includes providing all documentation required for submission. See the table below for PPAP submission requirements.

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

PPAP Submission Requirements

Requirement	Level 1	Level 2	Level 3	Level 4	Level 5
Design Record -for proprietary component/details -for all other components/details	R	S	S	*	R
Engineering Change Documents, if any	R	R	R	*	R
Customer Engineering Approval	R	S	S	*	R
Design FMEA	R	S	S	*	R
Process Flow Diagrams	R	R	S	*	R
Process FMEA	R	R	S	*	R
Control Plan	R	R	S	*	R
Measurement System Analysis Studies	R	R	S	*	R
Dimensional Results	R	S	S	*	R
Material and/or Performance Results	R	S	S	*	R
Initial Process Studies	R	R	S	*	R
Qualified Laboratory Documentation	R	S	S	*	R
Appearance Approval Report		S	S	*	R
Sample Product	R	S	S	*	R
Master sample	R	R	R	*	R
Checking Aids	R	R	S	*	R
Records of Compliance with Customer-Specific Requirements	R	R	S	*	R
Parts Submission Warrant Bulk material Checklist	S	S	S	S	R

S= The organization shall submit to the customer and retain a copy of records or documentation items at appropriate locations.

R= The organization shall retain at appropriate locations and make available to the customer up on request.

*= The organization shall retain at appropriate locations and submit to the customer upon request.

7. SPC

Basic statistical concepts, such as variation, control (stability), process capability and over-adjustment are understood and utilized throughout the Hydraulex plants. This is achieved by a combination of background (education and experience), internal training (documented procedures, special training such as Six Sigma training, etc.) and external training led by consultants, local institutions or training services. Statistical concepts are implemented as applicable in the context of process control, continuous improvement, new product development and corrective and preventive actions.

Hydraulex may request SPC data on a lot by lot basis depending on the customer requirements and current status of the supplier.

8. ENGINEERING CHANGES

Hydraulex has a process to assure the timely review, distribution and implementation of all customer engineering standards/specifications and changes based on customer-required schedule. This process is managed by the Engineering department. When requested by Hydraulex, suppliers shall review and provide feedback regarding engineering changes in no more than 2 weeks.

A change in these engineering standards/specifications will trigger an updated customer PPAP approval when these specifications are referenced on the design record and affect the documents of production part approval process, such as control plan, FMEAs, etc. Appropriate records of the updated PPAP are maintained. See the table below for instances where these changes may occur.

Criteria for Notification

Criteria for Notification	Examples
Use of other construction or material than was used in the previously approved part or product.	For example, other construction as documented on a deviation (permit) or included as a note on the design record and not covered in the PPAP section of this manual.
Production from new or modified tools (except perishable tools), dies, molds, patterns, etc. including additional or replacement tooling.	This requirement only applies to tools, which due to their unique form function, can be expected to influence the integrity of the final product. It is not meant to describe standard tools (new or repaired), such as standard measuring devices, drivers (manual or power) etc.
Production following upgrade or rearrangement of existing tooling or equipment.	Upgrade means the reconstruction and/or modification of a tool or machine or to increase the capacity, performance, or change its existing function. This is not meant to be confused with normal maintenance, repair or replacement of parts, tec. For which no change in performance is to be expected and post repair verification methods have been established. Rearrangement is defined as activity that changes the sequence of product/process flow from that documented in the process flow diagram (including the addition of a new process). Minor adjustments of production equipment may be required to meet safety requirements such as installation of protective covers, elimination of potential ESD risks, etc.
Production from tooling and equipment transferred to a different plant site or from an additional plant site.	Production process tooling and/or equipment transferred between buildings or facilities at one or more sites.
Change of supplier for parts, non-equivalent materials, or services (e.g., heat-treating, plating).	The organization is responsible for approval of supplier provided material and services.
Product produced after the tooling has been inactive for volume production for twelve months or more.	For product that has been produced after tooling has been inactive for twelve months or more: Notification is required when the part has had no change in active purchase order and the existing tooling has been inactive for volume production for twelve months or more. The only exception is when the part has low volume, e.g., service or specialty vehicles. However a customer may specify certain PPAP requirements for service parts.
Product and process changes related to components of the production product manufactured internally or manufactured by suppliers.	Any changes, including changes at the suppliers to the organization and their suppliers that affect customer requirements, e.g., fit, form, function, performance, durability.
Change in test/inspection method—new technique (no effect on acceptance criteria)	For change in test method, the organization should have evidence that the new method has measurement capability equivalent to the old method.

Any changes that meet the requirements above should be reported to Hydraulex in advance using the “Supplier Change Request” form.

9. PROCESS CONTROL

Supplier processes (assembly, heat treat, plating, machining, etc.) shall be validated at the supplier via in process monitoring (setup, hourly, end of run inspections per the supplier's control plan), in addition to any specified lot certification testing requirements called out by a Hydraulex print/specifications list. These instructions should be derived from sources such as the purchase agreement, quality plan, the control plan and the product realization process if applicable. Data collection worksheets are at the discretion of the supplier unless otherwise required.

10. TRAINING

Suppliers are responsible for the training of personnel affecting product quality towards competence in their assigned job functions. This may be accomplished through a combination of internal class room and hands on training, external training via consultants or educational organizations, or background/experience. Personnel not fully competent in a specific job or task should be supervised, given restricted duties, paired with an experienced associate, or otherwise handled with extra attention until competence is achieved.

Effectiveness of training should be evaluated as the responsibility of the employee's contribution towards achievement of quality and productivity goals and adherence to safety guidelines increases. Employees in positions directly affecting product quality should be made aware of the relevance and importance of their contribution to quality objectives.

Records of education, training, skills and experience should be tracked for the length of employment with the supplier and updated at regular intervals.

11. TRACEABILITY

Supplier traceability system shall guarantee that raw material origin, manufacturing/processing inputs (materials, production line, equipment status, etc.) and dates as well as any inspection record and shipment details are available when Hydraulex sends a traceability request.

An efficient traceability system is fundamental to determine and limit the scope of a non-conformance as well as an aid to pinpoint events during the manufacturing/processing phase that could have contributed to a non-conformance.

12. PRESERVATION OF PRODUCT

Suppliers shall guarantee the conformity of products during internal processing and delivery to the intended destination. This preservation includes adequate identification, handling, packaging, storage and protection. General guidelines, where practicable:

- Skids of bulk material shall not be over-filled
- All material shall be identified properly with the original Hydraulex tag(s)

Parts susceptible to corrosion shall be packaged with corrosion inhibiting materials, such as VCI and/or desiccants. Parts designated for export markets are greater risk for corrosion due to longer transit times and extreme fluctuations in temperature and humidity.

13. FIRST IN, FIRST OUT (FIFO)

In order to detect deterioration, the condition of product in stock is assessed at appropriate planned intervals. Hydraulex uses an inventory management system to optimize inventory turnover time and

assure stock rotation, such as “first-in-first-out” (FIFO). All suppliers are expected practice FIFO in order to ensure that Hydraulex no interruptions in their production scheduling or deterioration of product condition.

14. ON-TIME DELIVERY

Hydraulex delivery rate is continually monitored by its customers. Suppliers have the ability to directly affect shipments to Hydraulex customers; therefore, they will be monitored and delivery ratings will be assessed and accumulated. Any supplier who fails to meet the requirements will be subject to lose points in their scorecard, possible probation, or suspension. The delivery performance directives established in the section 2 of the “Terms and Conditions for Hydraulex Purchase Orders” shall be observed at all times.

On-time delivery is required of all suppliers. Hydraulex provides appropriate planning information and purchase commitments to enable suppliers to meet this expectation. Suppliers are expected to communicate in advance any situation that jeopardizes a delivery commitment of both quantities and/or lead time.

SCAR’s (Supplier Corrective Action Request) could be issued at Hydraulex discretion when a delivery related instance creates manufacturing and scheduling problems. Suppliers who continue to receive poor delivery ratings will be removed from the Hydraulex Approved Vendor List.

15. NON-CONFORMING PRODUCT

Suppliers are responsible for containing all non-conforming material found at their facility. Non-conforming product shall consist of product or components that are confirmed to be defective, unidentified, suspected to be non-conforming, or do not meet Hydraulex one or more specifications (including received material from a sub-supplier).

Any suspect or non-conforming product discovered prior to shipment to Hydraulex shall be reviewed by the supplier quality department before it can be released.

Any product found to be suspect or non-conforming after shipment to Hydraulex will result in a Supplier Corrective Action Report (SCAR) and points assessed on the supplier’s scorecard.

16. ADVANCED NOTIFICATION

Suppliers will notify Hydraulex immediately prior to shipping when any non-conforming material or condition is discovered. This includes any discovery of any non-conformance produced by another supplier.

Non-conformances reported by a supplier but produced elsewhere will not affect the reporting supplier’s scorecard.

17. SUPPLIER CORRECTIVE ACTION REPORT (SCAR)

Hydraulex will issue a SCAR to suppliers found responsible when a non-conformance is discovered at either one of the Hydraulex facilities or a Hydraulex customer. Suppliers will be expected to provide Hydraulex an 8D (8 Disciplines workbook) that includes the root-cause and corrective-action plan to fix non-conformance and prevent it from reoccurring.

The below table lists the 8D completion lead times:

8D Section	Lead time
3D Complete	3 working days from SCAR issuing date
4D Complete	7 working days from SCAR issuing date
7D Complete	15 working days from SCAR issuing date

8D Template Sample

HYDRAULEX The Right Replacement, Right Now®						SUPPLIER CORRECTIVE ACTION REPORT					
Concern Type		Purchasing Order		SCAR #/Process / Concern/Issue		SCAR Number		Requested Qty (per a contract/issue)		Hydraulex Plant	
Part Number(s)		Receiving Date		Vendor Name		Issuing Date					
1. Identify team members / Roles & Responsibilities:											
Hydraulex Plant		Quality Tech		Planner/ Buyer		Parts Room					
Hydraulex Corporate		Quality Mgr		Purchasing Mgr		Materials Mgr					
Supplier Contact		Sales		Quality		Shipping					
2. Define the problem:											
Problem Statement		What is wrong?		Why is a problem?		Who reported / found it?					
Problem Description		Where the problem was found?		What is the applicable standard / spec?		When the problem was found / reported?					
Problem Description		<p>The below points describe the issue and the corrective action plan. The below points describe the issue and the corrective action plan. The below points describe the issue and the corrective action plan.</p> <p>A solution will be developed and a timeline for the corrective action plan will be provided.</p> <p>A discussion will be held with the customer and the supplier to ensure the corrective action plan is understood and agreed upon.</p> <p>If OK, you are welcome to provide a problem description and corrective action plan to the customer.</p>									
3. Implement & Verify Interim Containment Action(s):											
Type		Containment Action Description		Qty (pcs)		Date Plan		Date Actual		Verified Y/N	
Mandatory		Inventory on-hand (at Hydraulex) review / inspection and certification.									
		Stock in transit (it will be inspected by Hydraulex when received at plant and certified upon arrival).									
		Inventory on-hand (at vendor location) review / inspection and certification.									
		Identification of certified shipment (commenced to receiving).									
		Stock on-hand review / inspection and certification.									
Additional											
4. Root Cause(s) Identification:											
Type		Root Cause Description		Process		Verified Y/N		Verification Date			
Why the problem occurred?											
Why the problem was not detected?											
5. Identify & Verify Proposed Corrective Action(s):											
Type		Corrective Action Description		Owner		Department		Verified Y/N		Verification Date	
6. Implement Permanent Corrective Action(s):											
Type		Corrective Action Description		Owner		Date Plan		Date Actual		Verified Y/N	
7. Identification of Action(s) to Prevent Re-Occurrence:											
Type		Corrective Action Description		Owner		Date Plan		Date Actual		Verified Y/N	
8. Communicate Results & Recognize Team:											
Date Closed:		Reviewed & Approved by:									

Hydraulex completes Header, 1D and 2D

Supplier has 3 working days to complete

Supplier has 7 working days to complete

Supplier has 15 working days to complete

18. SUPPLIER RESPONSIBILITIES / CHARGEBACKS

Suppliers will be responsible for all costs associated with material that is found non-conforming whether discovered at a Hydraulex facility or at a Hydraulex customer. This includes, but is not limited to rework, logistics, Hydraulex customer chargebacks, Hydraulex internal sorting/inspection and/or rework, third party sorting/inspection and/or rework, and any other costs incurred by Hydraulex resulting from the non-conformance. The directives established in the section 7 of the “Terms and Conditions for Hydraulex Purchase Orders” shall be observed at all times.

The supplier will be notified of any non-conformance as soon as the responsible party has been determined. Any chargebacks to the supplier will include proper documentation from Hydraulex, which may include:

After 4 weeks of any SCAR notification, a debit memo with a tracking number (so it can be linked to a specific SCAR) will be provided and it will include any or all of the below details:

- Labor fees breakdown.
- Internal and/or External sorting reports and fees.
- Internal and/or External rework charges.
- Logistics fees.

19. CONTROLLED SHIPPING

Controlled shipping will be considered a part of any non-conformance recovery plan. Suppliers will provide the level of certification necessary to fulfill the requirement supplied at the time of non-conformance.

- **Controlled Shipping Level 1 (CS1):** The supplier will contain all suspect material and certify that it is 100% defect or non-conformance free prior to shipping. Hydraulex quality department will determine the number of shipments that will require this level of certification, which may depend on the supplier’s ability to provide a root-cause and verified corrective action.
- **Controlled Shipping Level 2 (CS2):** Should the supplier fail to contain the non-conforming material or fail to properly implement the corrective action and incurring an additional non-conformance for the same concern, CS2 will be implemented. The magnitude of this controlled shipping level will be determined by Hydraulex quality department and may include, but is not limited to a third party sort, additional certified lots, or paid sorting supervision by a Hydraulex designee.

20. SUPPLIER ASSESSMENT

Each calendar year, key suppliers will be assessed as to their effectiveness in meeting our goal of providing the highest quality products to its customers. Key suppliers’ performance will be monitored through the following indicators:

- Incoming quality of purchased components and/or services (DMR’s that will be issued as SCAR’s).
- End-customer disruptions due to defective purchased component/service (RGA’s that will be issued as SCAR’s).
- Delivery schedule performance (On-Time Delivery Rate).

Hydraulex promotes key suppliers to monitor the performance of their manufacturing processes. Key suppliers shall be determined by Corporate Management based on the frequency of shipments by the

supplier, and the relevance of the product or service to final quality. All customer quality issues caused by a supplier will be recorded and addressed as required by incident.

21. SCORECARD SYSTEM / SUPPLIER PERFORMANCE EVALUATION

Key suppliers will receive a quarterly scorecard from the Hydraulex quality department. The Supplier Scorecard System is used to evaluate overall supplier performance: Each supplier's overall score represents the sum of both quality and delivery performance. The quality performance is quantity of SCARs per quarter and the delivery performance is estimated based in the % of on-time deliveries in a given quarter. The following table describes the two metrics and their overall score equivalences:

SCAR's	Points
0	50
0-2	40
2-4	30
4-6	20
>6	10

Delivery Score %	Points
81 – 100	50
61 – 80	40
41 – 60	30
21 – 40	20
0 – 20	10

The maximum score is 100 points and the lowest possible score is 20. Depending on their performance on a year-to-date basis, their status may escalate and require action by Hydraulex.

Rating	Supplier Score	Action
A	81 - 100	GREEN status, only SCAR C/A's must be completed.
B	61 - 80	YELLOW status, supplier improvement plan needed.
C	21 - 40	RED status, improvement plan and audit on-site needed to business continuation.
D	0 – 20	Contract Review / Business Hold

22. AUDITS

Hydraulex may conduct an initial supplier audit in order to determine whether or not an organization will be accepted as a supplier. Annual on-site audits to key suppliers may be conducted with the purpose to verify no major concerns could compromise the quality of the products / services provided to Hydraulex:

Supplier Rank	Score	Action Required
A	80-100	No C/A and/or improvement plan required. If YELLOW elements, they will be directly audited the next period. If red elements, C/A required.
B	50-79	YELLOW and/or RED elements require C/A.
C	0-49	Supplier shall submit an overall Improvement Plan.

Additional supplier quality audits may take place as determined by the Hydraulex quality department. All audits will be based on the minimum requirements of the ISO9001 standard.

23. CONTINUOUS IMPROVEMENT

Suppliers will be expected to take part into the VAVE workshops promoted by Hydraulex. Additionally, Hydraulex may have specific continuous improvement tasks that the supplier will be expected to perform.

24. CONTINGENCIES

A supplier must have a contingency plan for events that may cause a delay in production resulting in missed shipments to Hydraulex.

25. LOGISTICS, PACKAGING AND LABELING

The directives established in the section 5 of the “Terms and Conditions for Hydraulex Purchase Orders” shall be observed at all times.

25.1 Planning Forecast Policy

Procurement shall provide forecast to Supplier if asked by Supplier. Forecast are subject to change per business plan, or market demands.

25.2 Packing Lists, Shipping Labels & Bar Code Label Instructions

- Packing lists must contain: Hydraulex part number, manufacturer’s part number, all lot numbers in the shipment with quantities per lot, P.O. number, number of cartons and quantity per carton and total quantity shipped, unless otherwise authorized in writing by Hydraulex.
- Shipping labels shall be formatted and located according to Hydraulex standard label. Labels must contain HYD ‘s part number, drawing revision level, part description, supplier number and location, manufacture date, number & quantities of lots, total quantity shipped, P.O. number and all requirements identified on the part drawing and specification. Hydraulex will accept bar code labeling in accordance with AIAG (Automotive Industry Action Group) shipping/Parts Identification Label Standard AIAG-B-3, unless otherwise authorized in writing by the local purchasing entity. See Appendix for 2.0 for Barcode Label standards.

25.3 Documents to be provided with Shipment

Minimum requirements include bill of lading, packing list & commercial invoice.

25.4 Label Requirements

Below are minimum label requirements. Additional label requirements from individual Hydraulex business units may be required.

25.4.1 Metal Bar Stock Suppliers

The minimum information to be shown on labels for bar stock is Supplier’s name, material type and grade and a supplier initiated unique traceability number that can be used to trace the material to its manufacturing process.

25.4.2 Manufactured Component Suppliers

The minimum information to be shown on labels for component parts is Supplier’s name, purchased part number and Supplier’s initiated unique traceability number that can be used to trace components to their

manufacturing process and raw material used. Date Coding or Lot Coding can be used in lieu of traceability.

25.5 Packaging & Transportation

Unless packaging and/or mode of transportation are specified by Hydraulex, it is Supplier's responsibility to determine the appropriate means to ensure product arrives on time and undamaged. Hydraulex works off the premise that supplier knows their product and process best and should have the expertise necessary to determine the most appropriate packaging and transportation at the time of quotation. Supplier must comply with all packaging and transportation terms contained in the Terms and Conditions.

Supplier is expected to ensure that product received at the Hydraulex facility is undamaged, uncontaminated, corrosion free and suitable for use.

25.6 Shipping Deviation Approval & Charge Allocation

Supplier shall get approval from Hydraulex prior to shipping deviations.

25.7 Freight Charges and Routing

Supplier shall contact Hydraulex Procurement representative for Freight Charges and Routing.

25.8 Rules of Origin

Rules of Origin are used to determine the country of origin of a product for purposes of international trade. There are two common types of rules of origin depending upon application, the preferential and non-preferential rules of origin. The rules of origin criteria vary from country to country. Vendors must apply the proper rules of origin to the goods that he is going to supply.

25.9 Classification

Country's Harmonized Tariff Schedule (HTS) is the primary resource for determining tariff classifications for goods imported to a specific country.

The Harmonized Tariff Schedule is based on the international Harmonized Commodity Coding and Classification System (Harmonized System), which has been established by the World Customs Organization. Virtually all countries base their tariff schedules on the Harmonized System, making it easier to conduct international trade. Vendors should provide the tariff codes following the classification criteria where the goods are being manufactured. It is necessary for the vendors to classify the goods properly in order to give to the buyers the proper tariff code for classification purposes.

25.10 Markings

The vendor or the manufacturer must mark where the goods were manufactured on the packaging and product. The markings should be legible, and located in a conspicuous place. A mention of the country where the goods were manufactured must be shown on the commercial invoice.

25.11 Packing Slip

The vendor must provide a computer-generated packing slip document that must have the following fields, and their corresponding information: Customer Reference Number or Order Number; Packer Date; Packer Number; Sold To; Consign To; Gross Weight; Net Weight; Dimensions; Seal Number, if applicable; Booking Number, if applicable; Quantity; Item or Part Number; Description; Marks; Vendor Acknowledgement Number; Customer legal name; Frontier of Discharge; Destination; Country of Origin.

25.12 Commercial Invoice

The vendor must provide a computer generated commercial invoice document that must have in writing the following fields, and their corresponding information: Customer Reference Number or Order Number; Consign To; Broker; Invoice Date; Invoice Number; Quantity; Hydraulex Item Number; Description; Country of Origin; Harmonized Tariff Code; Price of each good or part in US Dollars; Marks; Vendor Acknowledgement Number; Customer legal name; Frontier of Discharge; Destination; Country of Origin; Statement of Wood packaging – if applicable; Statement of Destination Control.

25.13 Wood Packaging

Most countries regulations require wood product material (WPM) used in international trade to be treated to kill harmful insects that may be present. WPM must be marked with the International Plant Protection Convention (IPPC) logo, the two-letter International Organization for Standardization (ISO) code for the country that treated the WPM, the treatment facility number assigned by the national plant protection organization, and either HT for Heat treatment or MB for Methyl Bromide. The vendor must have available a Phytosanitary Certificate that will be provided to the buyer if it is required.

APPENDIX

Bar Code Label Instructions

Hydraulex will accept bar code labeling in accordance with AIAG (Automotive Industry Action Group) Shipping/Parts Identification Label Standard AIAG-B-3.

Definitions

- **Part Label:** A label used to identify the contents of an individual shipping pack. Each container, whether expandable or returnable, requires a minimum of two-Part Labels.
- **Master Label:** A label used to identify and summarize the total contents of the same part number in a multiple pack. A multiple pack (Pallet, Crate, etc.) is a pack containing more than one individual shipping container of the same part number or different part numbers.
- **Mixed Load Identifier:** A Label used to identify mixed part numbers in a multiple pack or pallet.

Label Characteristics

LABEL	HEIGHT	WIDTH
Part	4.0" (102 mm)	6.0" (152 mm)
Master	6.0" (152 mm)	8.0" (203 mm)
Mixed Load	4.0" (102 mm)	6.0" (152 mm)

- **Quality:** Labels are to be wrinkle free and durable to ensure readability at destination. A sample label must be tested to ensure accuracy of readability, print contrast and all other specifications prior to use.
- **Symbology:** Bar codes must be 3 of 9 (Code39) type and conform to the AIAG Standard.
- **Material:** Labels can be pressure sensitive or dry gummed type. Adherence to the package must be ensured.
- **Label Protection:** Labels must be protected against moisture, weathering, and abrasion. Laminates, sprays, window envelopes and clear plastic pouches are examples of possible protection methods. In selecting a protection method, care must be taken to ensure that labels meet reflectivity and contrast requirements and can be scanned with contact and non- contact devices.

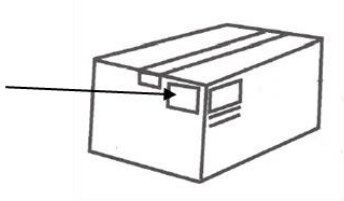
Part Label and Location

Part labels are required on adjacent corners of each shipping container as illustrated. The label must be parallel to the container base.

If parts are shipped in returnable containers that cannot be labeled, tags are to be used. The serial numbers of the two labels on a container must be the same. There is only one unique serial number per container.

SINGLE CARTONS

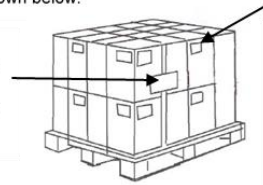
Part Labels are to be located on two adjacent sides. A wrap around label is acceptable.



CARTONS ON A PALLET

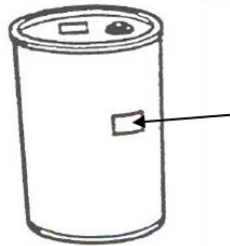
Part Labels are required on each carton as shown below.

Master label and Mixed load ID is required on each pallet and **must** be placed on the most visible area of each pack.



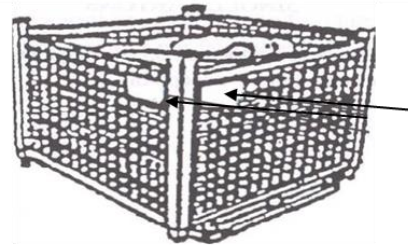
DRUMS OR BARRELS

Part Labels are required on two sides, or a side and top of the container.



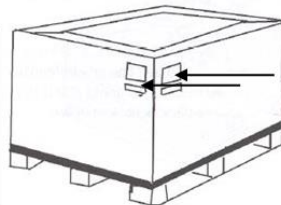
HIGH BOYS, TRUCKS, WIRE BASKETS, ETC.

Part Labels are to be attached to adjacent sides of container or two loose top pieces



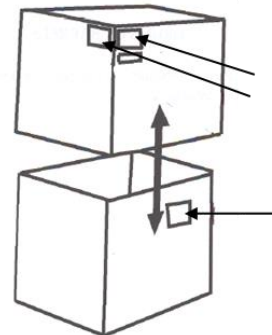
PALLET BOX/GAYLORD

Labels are to be attached to adjacent side of containers.



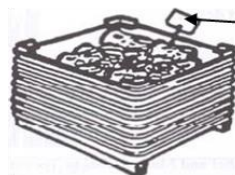
TELESCOPIC CONTAINERS

Part Labels are to be attached to adjacent sides of container. One part Label must be attached to the bottom half of the container.



METAL BIN OR TUB

Tag one visible piece near top, or use a label holder.



Part Sample Label

PART NO. (P) 42-912	
QUANTITY (Q) 1500	P.O. NO. (K) 700292
SUPPLIER (V) 20594	REVISION E
SERIAL (S) 000000005	DESCRIPTION HEX SCREW
Specialty Screw Corporation Rockford, IL 61103	DATE 12/13/05 LOT V120345

Data Identifier Code

The first position, after the start code of the bar code symbol must be used to identify the information to follow. This character is not to be included in the human readable line, but must be shown in human readable characters under the title for the appropriate data area. Identification Manufacturer (AIM) and listed in US National Identifier Standard ANSI/FACT-1.

1. Part Number (P)

This is the part number as assigned by Hydraulex. The human readable characters and bar code symbols must be a minimum of 0.5 in. (13mm). The maximum character allowance for part field is 15 + 1 character for the data identifier "P".

2. Quantity (Q)

The unit of measure is number of pieces. If the unit of measure is not pieces, (e.g. gallons, pounds, etc.), it must be noted in human readable characters to the right of the human readable quantity. The unit of measure is NOT to be included in the bar code.

Human readable characters and bar code symbols must be a minimum if 0.5 in. (13 mm) high. The maximum characters allowance for the quantity number field is 8 + 1 characters for the data identifier "Q".

3. Purchase Order number (K)

This is the purchase order number assigned by Hydraulex. Supplier must use only current purchase order numbers. The human readable characters must be a minimum of 0.3 in. (8mm) high. The bar code symbol must be a minimum of 0.5 in. (13mm) high.

The maximum character allowance for the purchase order field is 6 characters + 1 character for the data identifier "K".

4. Supplier number (V)

This is the vendor no. (Supplier code) assigned by Hydraulex. The maximum characters allowance for the supplier number is 5 characters + 1 character for the data identifier "V".

5. Revision level (E)

This is the drawing revision assigned by Hydraulex, which is usually a letter, in human readable characters only. It cannot be left blank. The human readable characters must be a minimum of 0.2 in. (5mm) high.

6. Serial Number (S)

The serial number is a unique number for both the Part and master Label assigned by the supplier for each shipping container (e.g. carton, pallet, box, etc.) having identification labels. Serial numbers cannot be duplicated with the calendar year for the same supplier number. The human readable characters must be a minimum of 0.2 in. (5mm) high. The bar code symbol must be a minimum of 0.5 in. (13mm) high. The maximum character allowance for the serial number field is 9 characters + 1 character for the data identifier "S".

7. Supplier Location

Supplier name, country of origin, city, state (or province) and postal code must be shown in the lower left-hand corner of the bar code label. Character size is 0.1 in. (2.5 mm) high.




8. Description

This is the product description specified on the part print in human readable characters only. Minimum character size is 0.2 in. (5mm) high.

9. Manufacture Date and Lot Number

The manufacture date and manufacture lot of final production or assembly of all the parts in the container in human readable characters only. Minimum character size is 0.2 in (5mm) high.

Part Master Label Sample

PART NO. (P) 42-912		MASTER LABEL
		
QUANTITY(Q) 24995	P.O. NO. (K) 700292	
		
SUPPLIER (V) 20594	REVISION E	
		
SERIAL (S) 00000003	DESCRIPTION HEX SCREW	
	DATE 12/13/05	LOT V120345
Specialty Screw Corporation Rockford, IL 61103		0701-031e1

The Master Label Contents must conform to the same specifications as the Part label content specified in Section II-B above.

All pallets containing multiple containers or cartons of the same or different part numbers require a Master Label for each part number. The only exception would be one container on a pallet such as a Gaylord.

The heading MASTER LABEL must be printed in bold 1.0 in. (25mm) high letters. Recommended label size is 6.0 in (152mm) high by 8.0 in (203mm) wide. (An optional label size of 4.0 in high by 6.0 in wide can be used if all required information is contained in the label and is identified by the words MASTER LABEL). The Data Identifier for the serial number of a Master Label is "M".

"S" Unique Tracking Serial Number – Master Label, like items. The maximum character allowance for the serial number field is 9 characters for the data identifier "S". The serial number is a unique number for both the Part and Master Label assigned by the supplier for each shipping container (e.g. carton, pallet, box, etc.) having identification labels. Serial numbers cannot be duplicated within the calendar year for the same supplier number. The human readable characters must be a minimum of 0.2 in. (5mm) high. The bar code symbol must be a minimum of 0.5 in. (13mm) high.

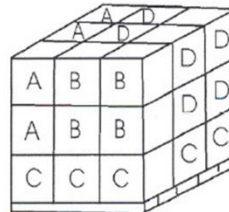
Placement of Master Label will be determined by the type of shipment (see diagram).

- The Master Label quantity must be the total quantity for each part number on a pallet.
- Mixed Load Labels are required, in addition to Part Labels and Master Labels, when there is more than one-part number on the same multiple pack. This label is shown below with bold 1.0 in. (25mm) high letters.



Special situations occur when there is a mixed load

Example # 1: Mixed load with multiple packs of multiple part number. This configuration calls for one Mixed Load Label and Master Labels for every part number in the load, even if there is only one container.



Requires:

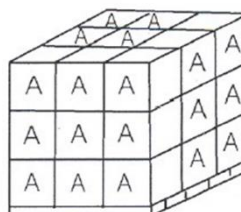
- (1) Mixed Load Label
- (54) Two Part Labels on each container
- (4) One Master Label for each part number

Note: When packing mixed loads, like part numbers should be kept together as much as possible, with the lowest quantity part numbers packed on top, unless the size or weight of the parts indicates otherwise. This will facilitate unloading

Example # 2: A load with the same part number does not require a Mixed Load Label.

Requires:

- (54) Two Part Labels on each container

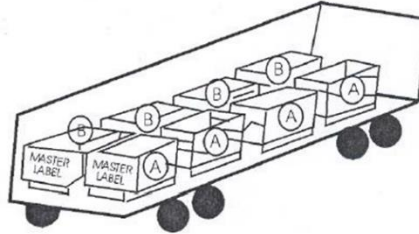


(1) Master Label

Example # 3: Mixed loads with multiple baskets or high boys on a tractor-trailer or truck. This configuration calls for one Mixed Load Label and Master Labels for each part number in the load, even if there is only one basket for certain a part. Master Labels should be placed nearest to the last loaded basket of that part number.

Requires:

- (1) Mixed Load Label
- (16) Two Part Labels on each container
- (2) One Master Label for each part number



Note: When packing mixed loads, like part numbers should be kept together as much as possible, with the lowest quantity part numbers packed on top, unless the size or weight of the parts indicates otherwise. This will facilitate unloading