ORACLE

Identification, Labeling, and Bar-coding Standards for Assemblies

PART NUMBER:	950-4477-01, Revision JK

OVERVIEW

This specification defines the requirements for product labeling applicable to products manufactured by Oracle or manufactured for Oracle by its suppliers or external manufacturers. Oracle requires the attachment of these identifying labels directly onto hardware solutions, systems and subassemblies as defined herein or in other Oracle requirements documentation. This specification defines the placement, size and content of these labels. Printed information can be in machine- and/or human-readable form.

AUDIENCE

Oracle employees, contractors and suppliers who are responsible for identifying physical Oracle products or assemblies.

OVERVIEW

This specification establishes the requirements for physical labeling of Oracle hardware systems and component assemblies with identifying information related to their manufacture. This specification applies to new, repaired and refurbished products.

The labels specified herein are applied directly to systems or assemblies which are manufactured, or assembled, by Oracle, external manufacturers (EMs), or their suppliers. This specification does not apply to labels and/or travelers used at Oracle or its suppliers strictly as a means of identifying or tracking product while in the manufacturing processes.

1. OTHER LABELING REQUIREMENTS, STANDARDS, AND SPECIFICATIONS

1.1. Other Oracle Requirements

In addition to the information supplied in this document, the following Oracle contracts and/or documents may also define labeling requirements:

- Master Supply Agreement (MSA) and its exhibits
- Award Letter
- Purchase Order
- Bill of Material (Structure)
- Drawing
- Other Applicable Specifications and Requirements

For example, a bill of material for a system-level assembly may include a part number for a blank label (stock). In such a case, the assembly would require use of this label material in conjunction with the standards set forth in this specification.

Similarly, a bill of material may specify exactly (by part number) which label to use. The specific part number referenced may call out the content of the label as well as formatting and the raw label stock.

In other cases the label or stock may not be specified by part number on the bill of material. In such cases defer to material requirements defined in Section9, Physical Material and Print Requirements.

If requirements conflict, contact Oracle Supplier Engineering (SE) or Supplier Program Management (SPM) for resolution.

1.2. Other Oracle Identification, Labeling and Bar-Coding Specifications

Additional Oracle requirements concerning labeling and bar-coding can be found in the following documents:

- *386-3182-02,* Specifies primary MAC address labels for Ethernet devices
- *386-4981-01,* Specifies primary WWN labels for Fibre Channel, ATA or SAS devices
- *917-1335,* Specifies labeling of containers of raw material or material incoming to Oracle manufacturing sites.
- *950-1419-03,* Specifies labeling of containers of finished-goods.
- 923-3383-12, WWOPS Global Supplier Management: Embedded Logic in Serial Numbers, Lot Codes, and Assembly Identifications (IDs). Note: Many of these numbers are “smart” identifiers, where some or all of the serial number have significance. The embedded significance or logic varies depending on the format of the serial number or lot code.
- 990-1241, Corp: Part Number, Revision and Interchangeability Conventions for Orderable and Manufacturing Items. Defines standard formats of fixed and configured part numbers.

Product development groups can also find labeling guidelines in the following design for manufacturability resources:

- *910-1021-01, Provides guidelines for PCA identification and marking.*
- *990-1028, Provides guidelines for PCA assembly and manufacturability.*

1.3. Industry Standards

The table below lists industry standards that are referenced in this document.

Table 1.3 - Standards

Standard	Use/Description
ANSI[1]/AIM[2] BC-1	Defines the Code 39 bar code symbology, which is a linear (one-dimensional) symbology suitable for encoding general purpose alphanumeric data. It is a reference symbology for many industry standards and can be used to encode a standard set of characters or full ASCII.
ANSI[1]/AIM[2] BC-4	Defines the Code 128 bar code symbology, which is a linear (one-dimensional) symbology suitable for encoding general purpose alphanumeric data or full ASCII. It also has a code-set which can encode strictly numeric data at twice normal density.
ANSI[1] X3.182	Provides a standardized method of measuring and grading one-dimensional bar codes on first-pass readability. It is applicable to of Code 39 and 128 symbologies.
EIA[3] 476	Defines a standard for date code marking of electronic components.
ISO[4] 3166	Defines three sets of country codes, alpha-2, alpha-3, and numeric-3, listed by full English and French country names.
ISO[4] 8601	Defines a convention for numbering weeks in a year.

1. ANSI is the American National Standards Institute.
2. AIM is the Automatic Identification Manufacturers association.
3. EIA is the Electronic Industries Alliance.
4. ISO is the International Organization for Standardization.

1.4. Exception Process

Any deviation from the standards and conventions of this such deviation must be approved by the Oracle product team (Engineering, Operations, and Service, at minimum) and documented in product's manufacturing specification at the level effected. Documented exceptions must include part number, description of deviation, justification, photograph or drawing of label to be used, and approval list.

See Appendix A.7 for current products exempted from this specification.

2. TYPES OF LABELS

This specification defines five types of labels used to identify physical systems and their subassemblies:

- *Solution label (e.g. Rack)*
- *System label (e.g. server or other standalone system)*
- *EZ label*

- *Serialized subassembly label*
- *Non-serialized (lot- or date-coded) subassembly label*

The applicability of each is explained in the subsections below. See examples of labels in *Section 4*. For the purposes of this specification, the levels of an assembly are defined in Table 2-1.

Table 2-1 Levels of Assemblies

Hierarchy	Type of Assembly		Definition
Top	Solution		A Rack level (L11) product offering containing both systems and discrete materials.
•	System		A self-functioning unit that is independently operable, such as a server, switch, storage array, or other third party item appliance. It can be:
•			• A fixed configuration, discretely salable pick-to-order (PTO) unit that
•			• An assemble-to-order (ATO) unit containing base unit and options.
•	Sub-assembly	Configured	A fixed or unique configuration that may include multiple FRU (or CRU) assemblies. It is not replaceable as a single unit, but is also not a standalone self-functioning unit.
•		Field-Replaceable Unit (FRU) or Customer- Replaceable Unit (CRU)	A fixed assembly that is replaceable at this level.
Bottom		Below FRU (or CRU)	A fixed assembly that is not offered as a FRU or CRU. More than one level may exist below the FRU level.

2.1. Solution Label

All hardware solutions require serialized labels to be placed on each configured rack (L11).

The information printed on this type of label is defined in section 0.

2.2. System Label

All system level assemblies (L10) as defined above require a serialized label. The information printed on this type of label is defined in *Section* 3.3.2.

2.3. EZ Label

All system-level assemblies also require a secondary serial label, an "EZ Label", to be placed on the *front* of all rack-mountable systems. This label redundantly identifies the serial number and must be placed where it can be easily read by without removing any part of the system. On systems where the primary identification label is readily accessible, the EZ label is not required. On many servers and storage arrays, the EZ Label is adhered to the RFID

tag.
The information printed on this type of label is defined in Section 0.

2.4. Serialized Subassembly Label

This type of labeling is used on subassemblies and cables which are:

- assembled into systems or other assemblies
- offered to customers as X-options
- stocked as field-replaceable units (FRUs) or customer-replaceable units (CRUs)

Subassemblies require serialized labels when the *Serial Control* attribute in Fusion equals 'Yes' (Internal Exception) in accordance with *WWOPS Quality: Setting Serial-Control and Serial-Tagging Attributes in Agile PLM and GSI, 923-3666.* Product teams may additionally require items such as keyboards, mice and transceiver modules to be assigned serial numbers and for their serial numbers to be collected during manufacturing.

Typically, serialized labels are applied to subassemblies having active electronic connections such as printed-circuit board assemblies (PCBA), internal data interconnect cables, disk drives, power supplies, display devices, and card readers. It is recommended that mechanical assemblies, such as chassis, covers and panels, be serialized for tracking purposes. Mechanical subassemblies, such as brackets, and external power cords and passive cables, may be lot coded instead. See *Section 2.5.*

The information printed on this type of label is defined in Section 3.3.4.

2.5. Non-Serialized (Lot- or Date- coded) Subassembly Label

This type of labeling is used on non-serialized assemblies which are:

- assembled into systems or other assemblies
- offered to customers as X-options
- stocked as FRUs

Examples include passive interconnect assemblies such as electrical cables and cords, and purely mechanical assemblies like brackets.

The information printed on this type of label is defined in Section 3.3.5.

3. PRINTED INFORMATION

3.1. Information Identifiers

Identifiers are left justified and are separated from the product-specific numbers/names by a colon and a space, except for country of origin which is separated by only a space. Neither the identifier, colon, nor space are encoded within the corresponding bar code. The identifiers are described in Table 3-1. For clarity and consistency, follow capitalization scheme defined herein. Identifiers are to be printed using a sans-serif typeface such as Helvetica, Arial, or Calibri.

NOTE: Only the identifier of the solution (rack), system or subassembly part number contains the corporation name, as in *Oracle® PN*.

Table 3-1 Summary of Information Identifier

Data Element	Level of Assembly	Information Identifier	Used to Identify...
Assembly Identification	Subassembly	AssyID	Supplier code and week of manufacture applicable to suppliers who add non-serialized parts to a serialized assembly
Asset ID	System	Asset ID	Global Individual Asset Identifier (GIAI) programmed into a system-level RFID tag
Config Code	Subassembly	Config Code	The level of core components inside a hard-disk drive
Date	System or Solution	Date	Date of manufacture in the form YYYY-MM-DD
Lot Code	Subassembly	Lot	Lot code of a cable, cord or other subassembly
Manufacturing (or EM) Tracking Number	Subassembly	MfgTN	An individual assembly, such as a memory module, with a unique number or ID when the serial number is only electronically readable
MAC Address	System or Subassembly	MAC ID	Media Access Control (Ethernet) address of Ethernet ports on main system board or domains associated with the system
Model Number	Solution or System	Model	Marketing part number
Part Number	Subassembly	Oracle® PN	Manufacturing part number of any subassembly or FRU
		Oracle® BasePN	Manufacturing part number of a base assembly from which higher-level assemblies are built
		Oracle® FRU PN	Manufacturing part number of a service item
	System	Oracle® PN	Manufacturing part number of a system-level assembly
		Oracle® BasePN	Manufacturing part number of a base assembly from which a system is built
	Solution	Oracle® PN	Manufacturing part number of a rack level (L11) solution
"ASSEMBLED IN: *XXXXXXX*" in English	Solution, System or Subassembly	ASSEMBLED IN	ISO 3166 country name, in English, of the country in which the system or subassembly was physically assembled or manufactured in accordance with applicable regulations
"ASSEMBLED IN: *XXXXXXX*" in Simplified Chinese	Solution or System	组装**地**	ISO 3166 country name, in Simplified Chinese, of the country in which the system or subassembly was physically assembled or manufactured in accordance with applicable regulations
"ASSEMBLED IN: *XXXXXXX*" in Traditional Chinese	Solution or System	**組裝地**	ISO 3166 country name, in Traditional Chinese, of the country in which the system or subassembly was physically assembled or manufactured in accordance with applicable regulations

Data Element	Level of Assembly	Information Identifier	Used to Identify...
Quantity of Unique Addresses	System or Subassembly	Qty	Quantity of sequential MAC Addresses, Worldwide Names, or Globally Unique IDs.
Revision	System or Subassembly	Rev	Oracle revision level of a fixed-configuration system or subassembly.
Serial Number	Subassembly	SN	Serial number of any subassembly or FRU
	System	SysSN	Serial number of a system-level assembly
	Solution	SysSN	Shop-floor control number or serial number of a solution
Data Element	Level of Assembly	Information Identifier	Use to Identify...
Service Processor MAC Address	System	SP MAC ID	Media Access Control address of Ethernet ports on service processor or system controller
Vendor Number	Subassembly	VN	Supplier number on Oracle purchase orders
Worldwide Name	System or Subassembly	WWN	Worldwide name of a SAS controller or Fibre Channel device

3.2. Priority of Information

Tables 3-3 through *3-7* define the labels used at each level of assembly. They also indicate whether the information is required in bar-coded form and/or human-readable print. If the amount of space available for labeling does not allow all required information to be printed, start by eliminating the information with the lowest priority. Refer to the priority established in Table 3-2.

Table 3-2 Priority of Required Information

Form	Data Element	Priority
Human-readable Print	ASSEMBLED IN: *XXX* (if not elsewhere indicated on the assembly)	1 (highest)
Bar Code	Serial Number	2
Human-readable Print	Part Number	3
Human-readable Print	Serial Number (or Lot Code for non-serialized assemblies)	4
Bar Code	Part Number	5 (lowest)

3.3. Bar Codes

When information is bar-coded, only the actual identifying number or address is encoded. Neither printed identifiers nor any data or application identifiers are encoded in the bar codes.

For products marketed only under the Oracle brand, print the information on the labels as defined in *Tables 3-3* through *3-7*. For products marketed under multiple brands such as the Advanced Product Line (APL) platforms,

follow the requirements in *Appendix A*.

Required information, if already printed accurately on another label such as a compliance label, does not need to be repeated. Additional information may be printed on the label(s) as needed.

3.3.1. Solution Labeling

Table 3-3 Printed Information on a Solution Label

Data Element	Human-readable Print Fixed values are shown in bold Variable values are shown in italics		Bar Code if Human-readable is printed	***Specification of Content***
Serial Number	required[1]	SysSN: *serial_number*	required[1]	923-3383-12
Part Number	required[1]	Oracle® PN: *part_number*	optional	990-1241
"ASSEMBLED IN: *XXXXXXX*" in English[2]	required	ASSEMBLED IN: *XXXXXXX*	none	Section 10, applicable regulations
"ASSEMBLED IN: *XXXXXXX*" in Simplified Chinese[2]	required	组装地: *XXXXXXX*	none	
"ASSEMBLED IN: *XXXXXXX*" in Traditional Chinese[2]	required	組裝地: *XXXXXXX*	none	
Date of Manufacture	optional	Date: *YYYY-MM-DD*	none	ISO 8601
Configuration Description	optional	*description*	none	n/a
Unit of Total Pieces	optional	*x* of *n*	none	n/a

1. Part number and serial number are not required if the solution is built using the BITS manufacturing model.
2. XXX is the official short country name, according to ISO 3166, translated into English, Simplified Chinese or Traditional Chinese to match the language of the preceding information identifier. See Section 10 for more information.

3.3.2. System Labeling

Table 3-4 Printed Information on a System Label

Data Element	Human-readable Print Fixed values are shown in bold Variable values are shown in italics		***Bar Code*** if Human-readable is printed	***Specification of Content***
Model	optional	**Model:** *Oracle_marketing_part_number*	none	none
Serial Number	required	**SysSN:** *serial_number*	required	923-3383-12
Part Number	required	**Oracle® PN:** *part_number*[4]	required	990-1241
Base Part Number	optional	**Oracle® BasePN:** *part_number*	optional	990-1241
MAC Address	optional[1]	**MAC ID:** *MAC_address_starting_value*	optional	923-3391
Quantity of MAC Addresses	required if MAC address is printed	**Qty:** *qty_of_sequential_MAC_addresses*	none	923-3391
Service Processor MAC Address	optional	**SP MAC ID:** *MAC_address_starting_value*	optional	923-3391
Quantity of SP MAC Addresses	required if SP MAC address is printed	**Qty:** *qty_of_sequential_MAC_addresses*	none	923-3391
Worldwide Name	optional	**WWN:** *worldwide_name_starting_value*	optional	386-4981-01
Quantity of Worldwide Names	required if WWN is printed	**Qty:** *qty_of_sequential_worldwide_names*	none	386-4981-01
"ASSEMBLED IN: *XXXXXXX*" in English[3]	required	**ASSEMBLED IN:** *XXXXXXX*	none	Section 10, applicable regulations
"ASSEMBLED IN: *XXXXXXX*" in Simplified Chinese[3]	required	**组装地:** *XXXXXXX*	none	
"ASSEMBLED IN: *XXXXXXX*" in Traditional Chinese[3]	required	**組裝地:** *XXXXXXX*	none	
Date of Manufacture	required	**Date:** *YYYY-MM-DD*	none	ISO 8601

Data Element	Human-readable Print Fixed values are shown in bold Variable values are shown in italics		***Bar Code*** if Human-readable is printed	***Specification of Content***
Configuration Description	optional	*ERP_item_description*	none	Oracle Fusion Cloud Applications

1. Do not print the MAC address if a primary network interface cannot be defined for a system. If a primary interface exists, the MAC address may optionally be printed. If more than one address is assigned to the primary interface, print the first (lowest value) of the series. For primary labeling of the MAC address on a subassembly or PROM, refer to 923-3391 and 386-3182-xx.
2. Required if Oracle is the prime contractor of hardware supplied to a branch of the U.S. military. May also be required when established as such in contracts with Oracle's sales or distribution partners.
3. XXXXXXX is the official short country name, according to ISO 3166, translated into English, Simplified Chinese or Traditional Chinese to match the language of the preceding information identifier. See Section 10 for more information.
4. Ideally, ATO systems indicate the configured ATO part number. In cases were a fixed base part number is indicated instead, this base part number must have the System Level and IB Trackable attributes in Fusion set true (Yes) and have the hardware warranty item B58892 structured directly to this fixed level.

3.3.3. EZ Labeling

Table 3-5 Printed Information on an EZ Label

Data Element		Human-readable Print Fixed values are shown in bold Variable values are shown in italics		*Bar Code*	*Specification of Content*
Serial Number	System	required	**SysSN:** *serial_number*	required	923-3383-12
Generational Identifier		required on products released with generational model naming which is not indicated on product nameplate	*generational identifier* For example: M2	none	Oracle Fusion Cloud Applications

3.3.4. Subassembly Labeling - Serialized

Table 3-6 Printed Information on a Serialized Subassembly Label

Data Element	Human-readable Print Fixed values are shown in bold Variable values are shown in italics	***Bar Code*** if Human-readable is printed	***Specification of Content***

Serial Number	required	**SN:** *serial_number*	required	923-3383-12
Part Number of assembly level being labeled	Required	**Oracle® PN:** *part_number*[6]	required	990-1241
FRU Part Number only when different than assembly level.	conditional[1]	**Oracle® FRU PN:** *part_number*	required	990-1241
Base Part Number	required on drive FRUs, optional on others	**Oracle® BasePN:** *part_number*	optional, if bar-coded separately	990-1241
Revision	conditional[4]	**Rev:** *revision*	optional	990-1241
Config Code	required on HDDs	**Config Code:** *config_code*	required	HDD specs
Assembly Identification	conditional[2]	**AssyID:** *assembly_ID*	none	923-3383-12
"ASSEMBLED IN: *XXXXXXX*" in English[3]	required	**ASSEMBLED IN:** *XXXXXXX*	none	Section 10, applicable regulations
Date of Manufacture	required	**Date:** *YYYY-MM-DD*	none	ISO 8601
Assembly Description	optional	*description*	none	Oracle Fusion Cloud Applications

1. If the part number of the FRU is different than that of any of the marked levels, the FRU part number must also be indicated on the assembly identified as "FRU PN."
2. Marking the Assembly Identification (AssyID) is only required if the indicated serial number is promoted from a lower-level assembly as is typically done on hard-disk drives when bracketry is added. In other words, if the vendor code, factory code or date of manufacture (YYWW) on the indicated serial number is not representative of the latest level of assembly, the AssyID must be marked. See Section 6 for

more information. on the indicated serial number is not representative of the latest level of assembly, the AssyID must be marked. See Section 6 for more information.
3. XXX is the official short country name, in English, according to ISO 3166. See Section 10 for more information.
4. The revision level is required on Oracle-designed printed-circuit board assemblies (PCBA's) and when the supplier's processes do not allow tracking of transformations, including all original manufacturing and rework operations, that occur to a serialized assembly over time. Revision level can optionally be marked on other assemblies.
5. Depending on the value of the subassembly and whether it is a field-replaceable unit, Oracle may be require, per contractual agreements with the U.S. government or its prime contractors, to permanently mark the assembly with a DoD UII. Per label drawings 263-4252-xx and 263-4527-xx DOD UII is required on global RFID tags.
6. Some subassemblies require that the System Level attribute in Fusion to be set true (Yes). These subassemblies include, but are not limited to: tape drives, HDS controllers, network switch cabinets, racks containing power supplies, and blade chassis.

NOTE: For DIMMs, no Oracle PN DIMM labeling is required from the DIMM Vendors (manufacturers) but the EM's are required to apply an Oracle PN label, prior to DIMM installation.

3.3.5. Subassembly Labeling - Non-Serialized (Lot- or Date-Coded)

Table 3-7 Printed Information on a Non-Serialized Subassembly Label

Data Element	Human-readable Print		***Bar Code*** if Human-readable is printed	***Specification of Content***
Lot Code	required	**Lot:** *lot code (or date code)*	optional	923-3383-12
Part Number	required	**Oracle PN:** *part_number*	optional	990-1241
Revision	optional	**Rev:** *revision*	optional, if bar-coded separately	990-1241
Vendor Number[1]	required	**VN:** *Vendor_Number*	optional	As assigned by Oracle
Supplier Name	optional	*Supplier_Name*	none	n/a
"ASSEMBLED IN: *XXXXXX*" in English[2]	required	**ASSEMBLED IN:** *XXXXXXX*	none	Section 10, applicable regulations
Date of Manufacture	required	**Date:** *YYYY-MM-DD*	none	ISO 8601
Assembly Description	optional	*description*	none	Oracle Fusion Cloud Applications

1. The vendor number is not required as a separate value if it is embedded in a lot code of the form defined in 923-3383-12.
2. *XXXXXXX* is the official short country name, in English, according to ISO 3166. See *Section 10* for more information.

4. SIZE, SHAPE AND LAYOUT OF LABELS

Because the space available for a label on a product or subassembly varies, the size and layout of the label are not

explicitly defined except in the case of the EZ label. In addition, the labels shown in the figures in this section only show a preferred arrangement of information. However, the human-readable text must be placed adjacent to the corresponding bar code. If the required information already exist on the assemblies, the required information does not need to be duplicated. Conversely, the information can be printed on separate labels to fit the space available as long as the bar code is printed on the same label as the corresponding text.

If the assembly is so small that all of the required information will not fit eliminate the barcodes first. Refer to the prioritization of printed information in Table 3-2.

4.1. Solution Labels

Figure 4-1 shows examples of solution labels. The information printed on a solution label will vary depending on the application. See the requirements in Section 0.

Figure 4-1 Example of Solution Labels

Rack Solution Label:

The information printed on system labels will vary depending on the application. See the requirements in Section 3.3.2.

Part numbers and reference drawings for standard sized labels are summarized in Table 4-1. Most systems will require two of these labels to accommodate the required identification information. Examples are shown in Figure 4-2.

NOTE:	The standard sizes are not required. Product teams may specify other sizes as needed to fit available space.
NOTE:	In most cases, the MAC Addresses or WWNs printed on the labels below are copied from the primary identification labels which appear on the internal boards or other devices. The primary labels are specified in 386-3182-xx, for MAC Addresses, and 386-4981-01-xx, for WWNs.

Table 4-1 Standard System Labels

Use	Label Size (height x width)					
	10mm x 43mm	*10mm x 70mm*	7mm x 32mm	7mm x 43 mm	7mm x 75mm	20mm x 50mm
Standard System: Serial No., Part No. and 'ASSEMBLED IN: *XXXXXXX*'	263-4504-xx	263-4505-xx			263-4506-xx	
APL System: Serial No., Part No. and 'ASSEMBLED IN: *XXXXXXX*'						263-4507-xx
One MAC Address, WWN or GUID	263-4508-xx			263-4509-xx		

Two MAC Addresses, WWNs, or GUIDs		263-4510-xx			263-4511-xx	
Three Language 'ASSEMBLED IN: *XXXXXXX*'			263-4558-xx			

Figure 4-2 Examples of System Labels

Example arrangement of printed information and label stock

Example 263-4505-xx:

4.2. EZ Label

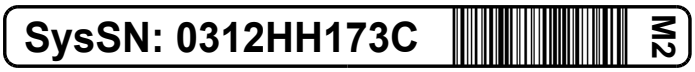
An EZ label is required on all system-level assemblies (e.g. systems, servers & populated racks) except where the primary labeling is readily accessible by the user.

The EZ label can be one of four sizes as specified by the drawings *263-3079-xx*, *263-3876-xx*, *263-4208-xx, or 263-4394-xx*. The printed content is defined in Section 0.

Figure 4-3, shows examples of each of the four sizes. If placement of the label on a product requires that it be turned 90 degrees from horizontal, orient the label so that "SysSN:" is at the bottom and the serial number reads from bottom to top.

Figure 4-3 Example EZ Labels

Original Standard Size, 263-3079-xx



Sized for Rack Rail Release Lever, 263-3876-xx

Sized for U.S. RFID Tag, 263-4208-xx

Sized for Global RFID Tag Overlay, 263-4394-xx

Labels shown at approximately twice actual size

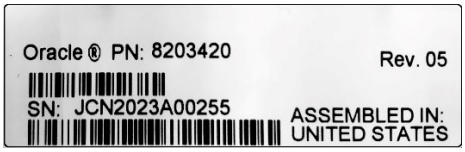
4.3. Serialized Subassembly Labels

Below are various examples of subassembly labels. The information printed on the subassembly labels will depend on the type and level of the assembly. See the requirements in *Section 3.3.4*

Assembly below FRU Level

Assembly below FRU Level

Assembly below FRU level



Subassembly Level

4.3.1. Hard Disk Drive Assembly Labeling

The serial number of the drive applies to both the bare drive and the bracketed assembly. As specified in Table 3-6, on page 11, the part number at both levels and serial number are required in both human-readable and bar-coded forms except where noted. In addition, a human-readable assembly identification (AssyID) is required to identify the vendor that attaches the bracket.

Figure 4-4 shows example of a drive being labeled at the time of bracket attachment. In this case the base part number and bar code must be reprinted on the overlay label.

4-4 Placement of Overlay Label on Disk Drives

Base and Bracketed assembly information created to this specification

4.3.2. DIMM Labeling

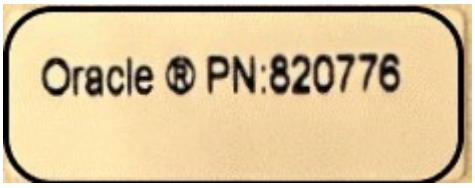
DIMMs are labeled according to the requirements in *Section 3.3.4,* which requires all DIMMs be marked with:

The DIMM vendor's label containing vendor part number and serial number. The vendor SN is used in the place of an Oracle synthesized SN.

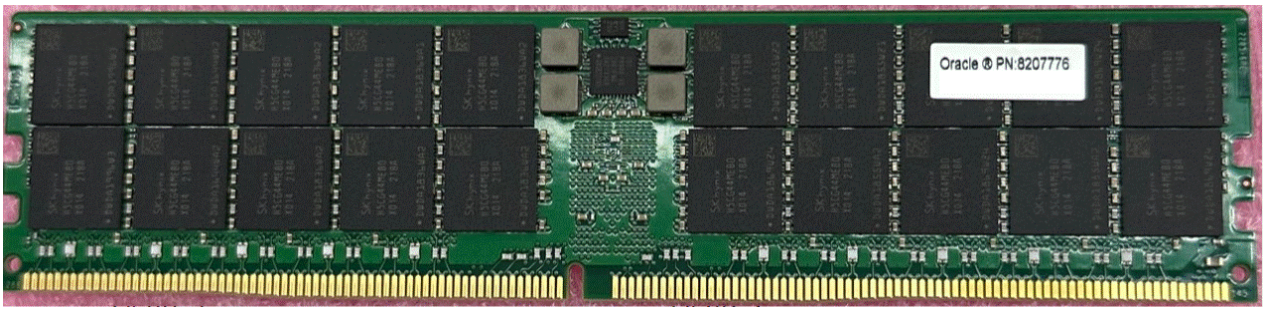
The Oracle manufacturing part number, applied to each DIMM used in server build. This is preprinted and applied by factory installing the DIMM at point of use.

According to the bill of material, other applicable specifications or purchase contracts, DIMMs kitted and shipped as boxed X-options or FRUs may require use of custom label stock.

Figure 4-5 Example Part Number Label for a DDR4 DIMM



NOTE: For DIMMs, no Oracle PN DIMM labeling is required from the DIMM Vendors (manufacturers) but the EM's are required to apply an Oracle PN label, prior to DIMM installation.



4.3.3. Printed-Circuit Board Labeling

On printed-circuit assemblies where space on the fab or permanent parts is limited, the information can be printed on one or several labels to best fit. The representation in Figure 4-6 is the suggested layout for board assemblies that require separate labels. The representation in Figure 4-7 is recommended if sufficient space exists in one place on the board. If the suggested sizes do not fit, adjust as necessary with Oracle approval.

Figure 4-6 Suggested Two-Piece Board Assembly

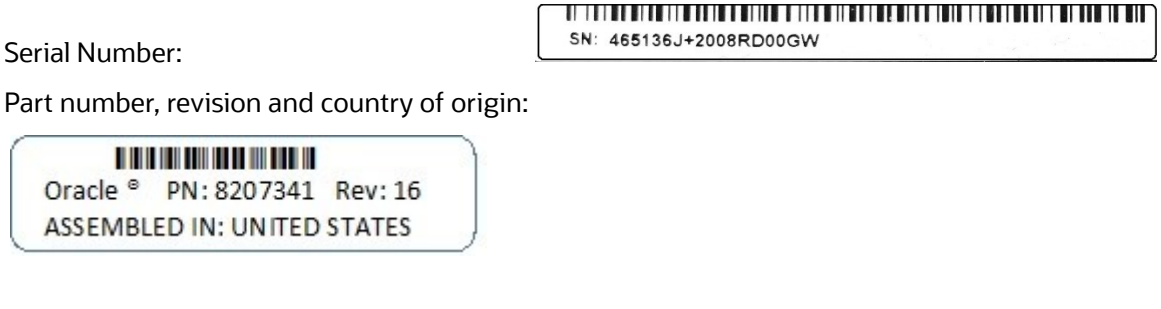
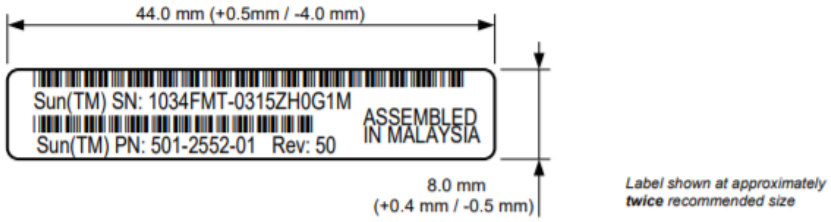


Figure 4-7 Suggested One-Piece Board Assembly Labeling



4.4. Non-Serialized (Lot- or Date-Coded) Labels

Figure 4-8 shows two examples of a non-serialized (lot- or date-coded) label. These labels are used primarily on internal kits, cables and major mechanical subassemblies. Bar-coding of the lot code and part number is optional. See the requirements in 3.3.5.

Figure 4-8 Examples of Non-Serialized

5. PLACEMENT OF LABELS

5.1. Solutions

The information printed on the solution (L11) label during manufacturing, by customs upon inspection of the product in transit, and by the customer upon receipt. Because the serial number — marked “SFC: ...” — on the

solution label is not used to provide warranty or extended-service coverage, it can be placed in a location which is not easily accessible.

5.1.1. Racked Solutions

Place the solution label on the rear of the rack frame, preferably in the top-left corner when facing the rear. Place it behind any doors that are attached.

5.1.2. Single-Unit Solutions

Place the solution label on a permanent part of the unit chassis apart from the system label. Preferably place it where it is less accessible than the system label, such as on the side or bottom of the chassis, so that it is not easily viewed when the unit is mounted in a rack.

5.2. Systems and Subassemblies

For all identification labels, *except* the EZ label, locate:

- On a permanent part of the assembly - Attach the label to a part of its base structure like a chassis or a board fab. Avoid placement on easily removable panels, covers or brackets. Placing the label on top of soldered board components is acceptable as long as it is approved by Oracle Systems engineering.
- On a surface defined as Class B, C or C1 when installed - Place only on a Class B, C or C1 surface as defined in *WWOPS manufacturing: Global Quality and Workmanship Standards, 923-2001-xx,* unless otherwise specified.
- Where it provides the best readability when installed - Preferably attach the label on a vertical, exterior surface, other than Class A or A1, which is exposed when installed or assembled into a rack. If there is insufficient space on that surface or no such surface exists, place it on a surface which is readily accessible when servicing.

6. RULES FOR SERIALIZATION AND RE-LABELING

6.1. Parent Assembly Having One Serialized Subassembly

When creating a new assembly from one serialized subassembly and one or more non-serialized parts, promote the serial number already identifying the one (key) subassembly to uniquely identify the new assembly. In this case, the new assembly must also be marked with the supplier's assembly identification (AssyID) if different from the supplier of the base assembly.

Retaining and promoting a base serial number is commonly done on hard-disk drives when a mounting bracket is attached. It is also done when stiffeners and panels are attached to a printed circuit board. Because this additional work is often done by a supplier which is not the manufacturer of the serialized base assembly, it is important to identify the supplier and assembly lot on the new label. Refer to example labels Section 4.3. If deviating get approval from Oracle and document exceptions in *WWOPS Global Supplier Management: Embedded Logic in Serial Numbers, Lot Codes, and Assembly Identifications (IDs), 923-3383-12.*

6.2. Parent Assembly Having Two or More Serialized Subassemblies

When creating an assembly from two or more serialized subassemblies, the new assembly must be given a new serial number. Each level of assembly is given its own serial number so that vendor, factory and date of manufacture is immediately identifiable, and database hierarchy is readily maintained.

6.3. Removing or Overlaying Labels

When creating parent assemblies do not remove any labels which identify lower-level assemblies, or cover information on them unless the information is replicated on a new label. It is permissible to remove and replace existing labels when reworking an assembly to a new revision or reconfiguring it to a new configuration. Reworking existing servers to a new part number, requires removal of original serial number (voiding) and applying a new/current serial number, reflecting current factory, DOM, and COO.

7. REQUIREMENTS OF BAR CODES

Oracle Systems has standardized on Code 39 (also called Code 3 of 9) for most applications, and Code 128 where space is restricted as on circuit board assemblies.

7.1. Code 39

Use Code 39 per *ANSI/AIM BC-1* standard for all bar codes unless available space prohibits its use or the value to be encoded contains an asterisk (*). Code 39 bar codes must conform to the requirements in Table 7-1.

NOTE: ***In Code 39 bar codes, an asterisk can only be used as a start/stop character, not as a character of the value being encoded.***

Table 7-1 Requirements of Code 39 Bar Codes

Bar Code Characteristic	Requirement
Width of Narrow Bar (X)	Minimum 0.0044 inch (0.11 mm).
Height of Bars (Y)	Minimum 0.100 inch (2.5 mm). Recommended 0.200 inch (5.0 mm).
Ratio of Wide to Narrow Bars (N)	2.25:1 to 3.0:1
Check Digit	None
Quiet Zones	Minimum 10 times narrow bar width before and after each bar code

7.2. Code 128

Use Code 128 per *ANSI/AIM BC-4* standard for bar codes when space for the length of the bar code is restricted or the value to be encoded contains an asterisk (*). Code 128 bar codes must conform to the requirements in Table 7-2.

Table 7-2 Requirements of Code 128 Bar Codes

Bar Code Characteristic	Requirement
Width of Narrow Bar (X)	Minimum 0.0044 inch (0.11 mm).
Height of Bars (Y)	Minimum 0.100 inch (2.5 mm). Recommended 0.200 inch (5.0 mm).
Check Character	Required
Quiet Zones	Minimum 10 times narrow bar width before and after each bar code.

7.3. Quality of Bar-Code Symbols

The *ANSI X3.182-1990 Bar Code Print Quality-Guideline* provides a standard which can be used to grade the quality of printed bar codes. Six different parameters are measured through ten consecutive scans using special testing equipment. The result is a letter grade "A" through "F". Oracle requires a "C" grade or better on its product identification labels.

7.4. Data Identifiers & Check Digits

Data identifiers are not used on product labels defined herein.

Oracle Systems does not use a check digit/character in its Code 39 bar codes, but one is used and required within Code 128 bar codes.

8. REQUIREMENTS OF HUMAN-READABLE CHARACTERS

Human-readable characters must be legible and conform to the following characteristics:

Language	Typeface (Font)	Weight	Minimum Height
English	Helvetica, Arial, Triumvirate, or similar	Regular	0.06 in. (1.5mm)
Traditional and Simplified Chinese	M Yuen, M Yuen HK, DF Hei, DFP Hei, or similar	Medium, W 3 or 5	0.07 in. (1.8 mm)

9. PHYSICAL MATERIAL AND PRINT REQUIREMENTS

In accordance with European Union Directive latest version, all materials which comprise the label, adhesive, and ink must be compliant with *914-1742-xx, Global Supplier Engineering: Environmental Specification – Product Compliance*. For more information refer to *990-1237, Corp: Restriction of Hazardous Substances (RoHS) Compliance and Declaration Policy*. Even individual labels which do not have an Oracle part number, or which are a part of a set of labels, must adhere to these policies and specifications.

9.1. Printed Circuit Assemblies

The following requirements apply to labels on assemblies which must undergo high temperature processing such as wave soldering.

Material Requirements:

Face Stock: 0.094 mm (.0037 inch) thick polyimide film with white matte printable coating.

Over-laminate: 0.013mm (.0005 inch) thick transparent polyimide.

Adhesive: High-temperature, solvent-resistant acrylic. Service temperature range of -40ºC to +260ºC (-40ºF to +500ºF). Minimum application temperature of 10ºC (50ºF).

Release liner: 65 g/m^2 (0.013 lb/ft^2) tough tear resistant, super strength in the machine direction (front to back) of 0.4 kg/mm of width.

Bar-coded and human-readable to print 100% black.

Shelf life to be guaranteed for six months when stored at 25ºC (77ºF) and 50% relative humidity.

Permanence of markings to comply with IEC/EN 60950, clause 1.7.14. Compliance is checked by inspection and by rubbing label surface by hand for 15 seconds with a cloth soaked with petroleum spirits.

Laminated labels must resist Freon, solder flux, MEK, and detergent water.

9.2. Other Assemblies

The following requirements apply to all assemblies other than printed circuit assemblies.

Material Requirements:

Substrate:

- Preferred: Min 0.050 mm (.002 inch) thick matte, white or silver polyester. Metalized is allowed except in use on RFID tags.
- Alternate: Min 0.090 mm (.0036 inch) 60lb litho paper with 0.05 mm (.002 inch) clear matte polyester overlay.

Adhesive:

- To exceed the strength of the face stock. Adhesive to have service range of -45ºC to +93ºC (-49ºF to +199ºF) and a minimum application temperature of +10ºC (50ºF). Adhesion to be 0.045-0.050 kg/mm.

Release Liner:

- 18 kg/m2 (0.0036 lb/ft2) tough, tear-resistant, super-calendared, densified cellulose stock with tensile strength in the machine direction (left to right) of 0.7 kg/mm of width and in the cross direction (front to back) of 0.4 kg/mm of width.
- Bar-coded and human-readable to print 100% black.
- Shelf life to be guaranteed for six months when stored at 25ºC (77ºF) and 50% relative humidity.
- Permanence of markings to comply with IEC/EN 60950, clause 1.7.14 . Compliance is checked by inspection and by rubbing label surface by hand for 15 seconds with a cloth soaked with petroleum spirits.

10. REQUIREMENTS FOR "ASSEMBLED IN: XXXXXXX" MARKING

'ASSEMBLED IN: *XXXXXXX'* must be marked in a permanent nature on all physical assemblies. If 'ASSEMBLED IN: *XXXXXXX'* appears on another label on the same product then the wording should match identically, so that the Country Of Origin (COO) is unambiguous. Care must be taken to show accurate 'ASSEMBLED IN: *XXXXXXX'* in accordance with the appropriate import and export regulations.

'ASSEMBLED IN: *XXXXXXX'* is printed on the label in human-readable form only. The statement begins with the words 'ASSEMBLED IN:' and, in place of *XXXXXXX,* is followed by the English name — official short names in English per International Standards Organization specification ISO 3166 — of the country in which the product is being assembled. In the event this specification conflicts with local regulations, it is the responsibility of the manufacturer, to choose the appropriate COO prefix and country name in accordance with the rules and regulations in effect where and when the product is manufactured.

For example, a subassembly which is built in the United States and which satisfies the rules of substantial transformation, would use the following statement:

ASSEMBLED IN: UNITED STATES

Abbreviations of the name of the country are not acceptable.

In certain applications, as specified in the tables within this document, ASSEMBLED IN: *XXXXXXX* must additionally be translated and printed in a permanent nature using both Simplified Chinese and Traditional Chinese characters.

Appendix A Additional Requirements for Fujitsu (Legacy APL and M10/M12) Products

A.1.1 Part Number and Revision Conventions

In addition to Oracle's part number, the Fujitsu part number and corresponding barcode are required to be marked on all Fujitsu M10/M12 FRUs except for the following:
* Oracle-supplied PCIe cards

A.1.2 Standard Part Number Conversion for Oracle-Designed Product

In the case of APL products and parts designed by Sun/Oracle a convention has been established whereby the Fujitsu part number can be derived from an Oracle part number in most cases. Refer to *Table A-1*.

Table A-1 Conversion of Oracle Part Numbers

Products and Related Components	Oracle Part Number Format	Oracle Part Number and Revision	Fujitsu Part Number and Revision
M4000/M5000 (except CPUM), IO Box, LE	significant (Sun classic)	**Oracle® PN:** *xxx-xxxx-dd* **Rev:** *rr*	On Systems: **PART NO. CF00***xxx-xxxx* **Rev.** *dd* On FRUs: **Fujitsu PN: CF00***xxx-xxxx* **Rev.** *dd*
	7-digit non-significant	**Oracle® PN:** *yyyyyyy* **Rev:** *rr*	On Systems: **PART NO. CF00***yyy-yyyy* **Rev. 01** On FRUs: **Fujitsu PN: CF00***yyy-yyyy* **Rev. 01**

NOTE: Fujitsu uses the same manufacturing part numbers to identify both the packaged and unpackaged levels of a FRU.

A.1.3 Fujitsu Designed Product

Oracle part numbers are assigned to all FRU levels. Fujitsu part number must be included as the initial characters of the Oracle Item description. Example: Oracle PN 8200032, Description: CA08208-K461,FRU,MBU_A,M12-1. Fujitsu part number and revision = CA08208-K461.

A.2 Serial Number

Oracle and Fujitsu use common serial-number formats on systems, FRUs and subassemblies. The formats are defined below. Refer to *Section 2* of *923-3383-12, WWOPS Global Supplier Management: Embedded Logic in Serial Numbers, Lot Codes, and Assembly Identifications (IDs)* for a comprehensive definition of the variables used in the serial numbers. Alphabetic characters *I* and *O* must not be used in any of the sequence numbers to prevent misinterpreting them with numerals *1* and *0* respectively.

A.2.1 System Serial Number (SysSN)

The system serial is represented in PPMYYWWSSS format where

PP Factory Code that Oracle provided. PZ means Fujitsu or Fujitsu IT Products.

M Model code for M10/M12/PCI-Box

YY Last two digits of the year.

WW Week of the calendar year.

SSS Sequence number

Product Model	Model Code (M)
DC1, DC2, DC3, DC1 DPF rack, Power Cabinet (Data Center Systems); M8000/M9000	D
FF (Form Factor Systems); M4000/M5000	F
LE (Niagara Systems)	L
IO Box	B
M10-4 and M10-5	0
Expansion Rack for M10-4S	1
Product Model	Model Code (M)
PCI Expansion Unit (PCI Box)	2
M10-1	3
Crossbar Box (XB Box)	4
M12-2 and M12-2S	5
Expansion Rack for M12-2S	6
M12-1	7

A.2.2 FRU and Subassembly Serial Number

A.2.2.1 DC, FF, and M10/M12

FRUs and subassemblies used in DC and FF products will be issued a 10-character serial number that can be represented by the variables *PPYYWWSSSS*, where:
PP is a factory code issued by Oracle Systems compliance engineering. For a complete listing of valid codes see https://systemsweb.us.oracle.com/safety/Manufacturing_OPS/mfg.codes.html
YY is the last two digits of the year.
WW is the week of the calendar year.
SSSS is a hexadecimal or alphanumeric sequence number.

A.2.2.2 IO Box and LE (EOL'ed 2014 or earlier)

FRUs and subassemblies used in IO Box and LE products will be issued an 18-character serial number that is defined in Section 2 of *923-3383-12, WWOPS Global Supplier Management: Embedded Logic in Serial Numbers, Lot Codes, and Assembly Identifications (IDs).*

A.3 System Labeling

Systems are identified with a label also know by Fujitsu as a system nameplate. The information required on this label is defined in *Table A-2*. Examples are shown in *Figure A-1*. 950-4477-01 Rev JD *Oracle Confidential* Page 33 of 45

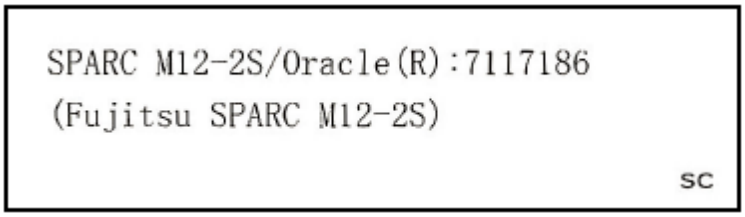
Table A-2 Printed Information on a System Label

Data Element	*Brand*	*Human-readable Print* Fixed values are shown in **bold** Variable values are shown in *italics*		*Bar Code* if Human-readable is printed	*Specification of Content*
Model Number	Fujitsu	required	**MODEL** *marketing_part_number*	required	950-1647-xx
	Oracle	required	**Model:** *marketing_part_number*	required	
Part Number	Fujitsu	required	**PART NO.** *common_part_number*	required	990-1241
	Oracle	required	**Oracle® PN:** *common_part _number*	required	
Serial Number	Common	required	**SER NO.** *serial_number*	required	923-3383-12 and above
Date of Manufacture	Fujitsu	required	**DATE** *YYYY-MM*	none	ISO 8601
Brand Name	Fujitsu	required	Corporate name in a san-serif font and reverse coloring as shown: **FUJITSU LIMITED**	none	none
	Oracle	none	none	n/a	n/a
"ASSEMBLED IN: *XXXXXXX*" in English[1]	all	required	**MADE IN JAPAN**	none	Section 10, applicable regulations

1. *XXXXXXX* is the official short name of the country, according to ISO 3166, translated into English, Simplified Chinese or Traditional Chinese to match the language of the preceding information identifier. See *Section 10* for more information.

SAMPLE MANUFACTURER'S LABEL

Sample Product Name Label (available only for M12)



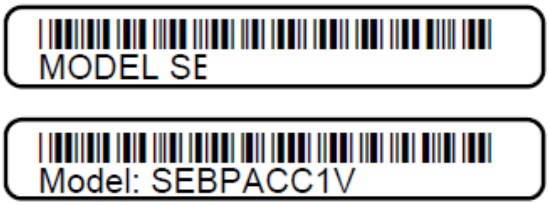
A.4 Alternate Marketing Model Number Labeling for legacy APL products

A separate label containing the alternate Marketing Model Number and bar code must be shipped with LE, FF, and IO Box products which are branded as Sun-Oracle or Fujitsu. The label may be placed on the product or added to the system ship kit depending on individual product requirements. The information required on this label is defined in *Table A-3*. Examples are shown in *Figure A-2*.

Table A-3 Required Information on Alternate Marketing Model Number Label

Data Element	***Brand***	***Human-readable Print*** Fixed values are shown in **bold** Variable values are shown in *italics*		BarCode if human readable is printed	Content
Alternate Model Number	**Fujitsu**	required	**MODEL** *alternate_marketing_model_number*	required	If the model number on the system label ends in *U*, print the same model number that ends in a *W*.
	Oracle	required	**Model:** *alternate_marketing_model_number*	required	If the model number on the system label ends in *Z* or *Z-N*, print the same model number that ends in a *V*.

Figure A-2 Examples of Alternate Marketing Model Number Label



A.5 FRU Labeling

Where possible the serial number and both Oracle and Fujitsu part numbers should be printed on the same label. If the available space prevents this, it is acceptable to print the information on separate labels. When this occurs, pair the information as follows, in this order of preference:

1. Print the Oracle and Fujitsu part numbers on one label and the serial number on a separate label.
2. Print the serial number and Oracle part number on one label and the Fujitsu part number on a separate label.

A.5.1 Serialized FRUs

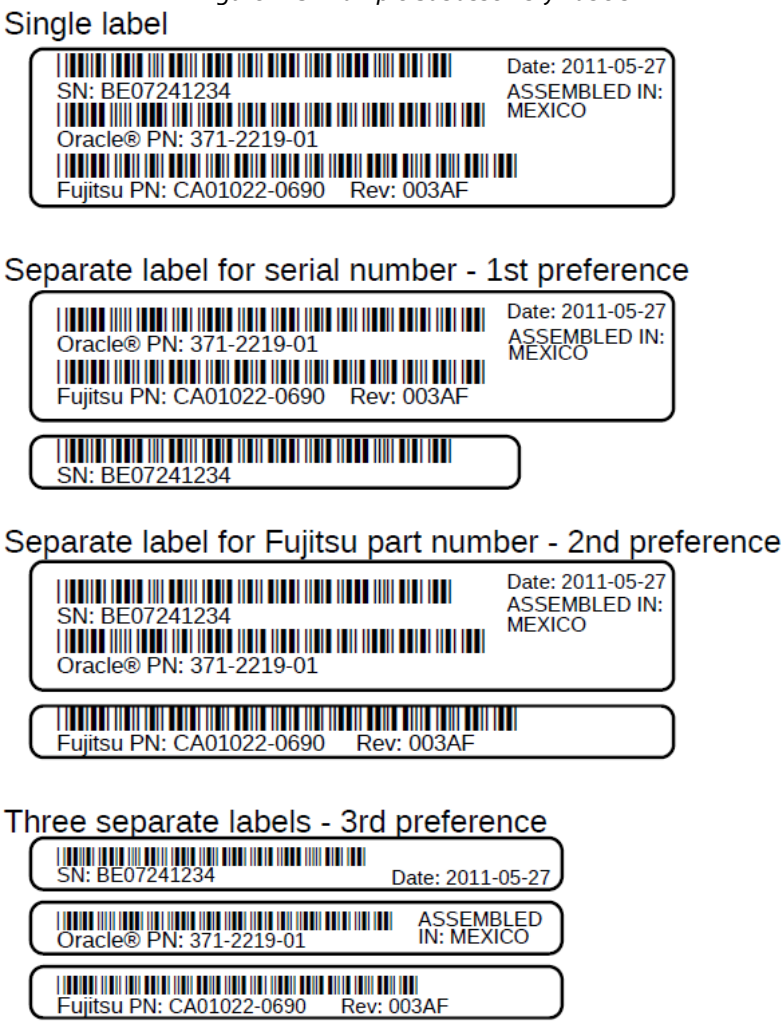
The information required on the label of a serialized FRU is defined *Table A-4*. Examples are shown in *Figure A-3*.

Table A-4 Printed Information on a Serialized Subassembly Label

Data Element		Human-readable Print ***Fixed values are shown in** bold* ***Variable values are shown in** italics*		***Bar Code*** if Human-readable is printed	***Specification of Content***
Serial Number	on subassemblies and FRUs	required	**SN:** *serial_number*	required	923-3383-12
Oracle Part Number	on subassemblies and FRUs	required	**Oracle® PN:** *Oracle_part_number*	required	990-1241
	on drive FRUs only	required	**Oracle® Base PN:** *Oracle_part_number*	optional	990-1241
Fujitsu Part Number		required at FRU level	**Fujitsu PN:** *Fujitsu_part_number*	required	Appendix A
Oracle Revision		conditionally required[1]	**Rev:** *Oracle_revision*	optional	990-1241
Fujitsu Revision[5]		required at FRU level	**Rev.** *Fujitsu_revision*	optional	Appendix A
Manufacturing Tracking Number		optional	**MfgTN:** *manufacturing_tracking_number*	required	923-3383-12
Assembly Identification		conditionally required[2]	**AssyID:** *assembly_ID*	none	923-3383-12
"ASSEMBLED IN: *XXXXXXX*" in English[3]		required if not shown elsewhere	**ASSEMBLED IN:** *XXXXXXX*	none	Section 10, applicable regulations
Date of Manufacture		required on power supplies, hard-disk drives, tape drives, optical drives, monitors, keyboards and mice	**Date:** *YYYY-MM-DD*	none	ISO 8601
CE Mark		required[4]	CE	n/a	n/a

1. The Oracle revision level is required on Sun-Oracle designed printed-circuit board assemblies (PCBA's) and when the supplier processes do not allow tracking of transformations, including all original manufacturing and rework operations, that occur to that serialized assembly over time.
2. Marking the Assembly Identification (AssyID) is only required if the indicated serial number is promoted from a lower-level assembly as is typically done on hard-disk drives when bracketry is added. In other words, if the vendor code, factory code or date of manufacture (YYWW) on the indicated serial number is not representative of the latest level of assembly, the AssyID must be marked. See Section 6 for more information.
3. *XXXXXXX* is the country name according to ISO 3166 in English. See *Section 10* for more information.
4. Required on OPL FF DAT drives. The height of the CE mark must be at least 5mm. Use artwork file 412-1802-xx.
5. Use Rev 01 on Oracle-designed parts that have non-significant item numbers, which don't have a dash level.

Figure A-3 Example Subassembly Labels



A.6 Cable Labeling

The information required on the labels identifying cables is defined in *Table A-5*. Examples are shown in *Figure A-7*.

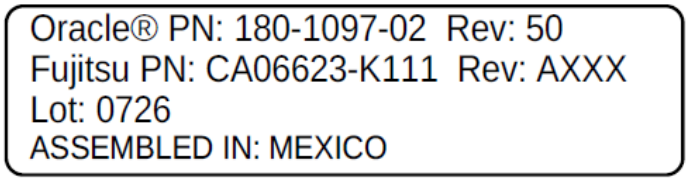
Table A-5 Printed Information on a Cable Label

Type of Information	Human-readable Print		*Bar Code if Human-readable is printed*	*Specification of Content*
Lot Code	required	**Lot:** *lot_code*	none	923-3383-12
Oracle Part Number	required	**Oracle® PN:** *Oracle_part_number*	none	990-1241

Fujitsu Part Number	required	**Fujitsu PN:** *Fujitsu_part_number*	none	Appendix A
Oracle Revision	optional	**Rev:** *Oracle_revision*	none	990-1241
Fujitsu Revision	required	**Rev.** *Fujitsu_revision*	none	Appendix A
"ASSEMBLED IN: *XXXXXXX*" in English[1]	required	**ASSEMBLED IN:** *XXXXXXX*	none	Section 10, applicable regulations

1. *XXXXXXX* is the official short country name, in English, according to ISO 3166. See *Section 10* for more information.

Figure A-7 Example Cable Label



A.7 Exempted Product from use of Specification

Product	Date	Reason
Oracle Health (Cerner)	8/13/24	Off the shelf labeling and multiple existing suppliers. Current labeling examples below: 

Related Information

Reference Documents and Records

Document Title	Number	Document Control	
		ESO Controlled	Quality Record
Drawing, MAC/Ethernet Address Label	386-3182-02		X
Drawing, Worldwide Name Label	386-4981-01		X
WWOPS Process Technology: Printed Circuit Board Assembly Workmanship Standards	910-1021-01	X	
Global Supplier Engineering: Environmental Specification – Product Compliance	914-1742	X	
WWOPS Quality: Specification of Bar-coded Identification Labels for Packaged Raw and Semi-finished Materials	917-1335	X	
WWOPS Manufacturing: Global Cosmetic Quality and Workmanship Standards	923-2001	X	
WWOPS Global Supplier Management: Embedded Logic in Serial Numbers, Lot Codes, and Assembly Identifications (IDs)	923-3383-12	X	
WWOPS Quality: Setting Serial-Control and Serial-Tagging Attributes in Agile PLM and GSI	923-3666	X	
Specification of Identification Labels for Packaged Finished Goods	950-1419-03		X
APL Part Number Matrix Specification (for Hard-Disk Drives)	950-5871-08		X
WWOPS Product Lifecycle and Technology: Advanced Process Technology – PCBA (DFM/DFT) Guidelines	990-1028	X	
Corp: Part Number, Revision and Interchangeability Conventions for Orderable and Manufacturing Items	990-1241	X	
Corp: Restriction of Hazardous Substances (RoHS) Compliance and Declaration Policy	990-1237	X	

Document History and Approvals

NOTE: Document history from 2004 thru 2010 have been removed. See revision "I" or earlier for full details.

Dash	Rev	Date	Description of Change	Originator
01	JB	2011-08-15	1. Added Table A-1 to explain the conversion of both 7-digit and 8-digit non-significant Oracle part numbers to Fujitsu part numbers. 2. Combined and reworded Sections A.1 and A.2 concerning conversion of an Oracle to Fujitsu part number. 3. Reworded Section 2.4 and changed the serial-control reference from GSI to Agile PLM. 4. Replaced references to part numbering standard 990-1010-xx with 990-1241. Updated reference documents list.	N/A
01	JC	2017-08-17	5. Removed references to obsolete documents throughout: 914-1265 US Supply Management: Refurbished Product Serialization Procedure 923-1057 WWOPS: Design for Manufacturability and Assembly Guidelines 923-3550 WWOPS Technology: Unique Identification of Product in Accordance with US Department of Defense Standards 990-1242 Corp: Unique Identifiers and Attributes Used for Product Traceability 2. Removed obsolete link to requirements for product serviceability from section 1.2 3. Removed references to Webdocs 4. Removed 990-1244 from reference document table 5. Updated document titles through out 6. Changed human-readable identifier for the serial number of rack solutions from 'SFC' to 'SysSN'.	N/A

01	JD	2020-04-15	Reworked to align with current business systems and evolved processes Removed references to specific and obsolete product lines (e.g. CRS) Cleaned up grammar and ported to Oracle style. Updated Fujitsu PN/SN requirements.	N/A
01	JE	2023-02-06	Added clarification in Section 10 that both the COO prefix and country name are covered the disclaimer about complying with local regulations. Changed Section 3.3.5 to make Date Of Manufacture barcode = "none" (was "required"). Changed references to Sun System Handbook to Oracle Fusion Cloud Applications.	N/A
01	JF	2023-02-14	Pictures on pages 16 & 17 were fixed/updated. Inserted graphics had shifted incorrectly and dimm label pic updated.	N/A
01	JG	2024-03-06	Remove requirement to add Oracle Part Numbers to SSD's FRU's and system build drives	N/A
01	JH	2024-06-17	Changes made to table 3.3.4 on page 12 – Reversed removal of bracketed HDD/SSD labeling per Rev JG. Labeling of bracketed drives should be performed..	N/A
01	JI	2024-08-13	Added comment to 1.4 EXEMPTIONS and added Appendix 7 to list exempted products, first being Oracle Health (Cerner vendor products).	N/A
01	JJ	2024-09-19	No content changes. Update title on Fusion General Info page to match title on document.	N/A
01	JK	2024-10-03	Rev was incorrect and has been updated - no content changes	N/A

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