



Supplier Traceability Data, CSV Data Feed Format

Document Number and Revision: 7326396 Rev 12

Overview

This document contains the technical specifications for sending quality and traceability data using the CSV (comma separated values) format to Oracle.

Audience

Product Lifecycle and Technology Process and Quality and external supplier IT teams

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Introduction

Suppliers are required to send data for items described in *Supplier Traceability Requirements*, 923-3406, including

- New units shipped to Oracle or Oracle customers
- Units returned by Oracle and rework by external suppliers
- Data corrections for previous submissions

Before conducting the file upload, external suppliers must validate the data for completeness and accuracy.

External suppliers may send data from a single centralized location or allow each location to submit data individually.

This document describes the CSV (comma separated value) format for sending traceability data to Oracle including the following:

- Technology options
- File naming specifications
- Structure specifications
- Data elements for each subject area
- Specific examples and sample data files

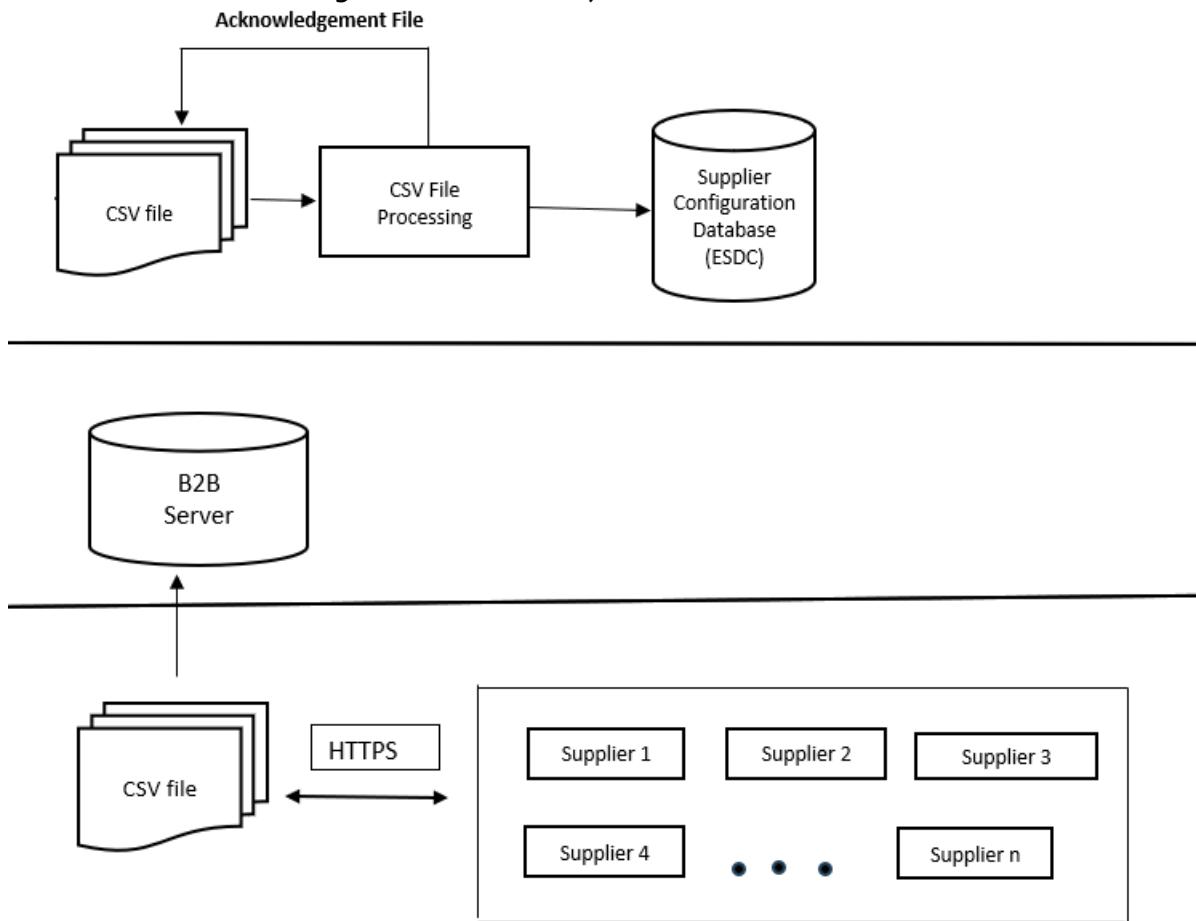
NOTE 1: Oracle expects external suppliers to provide information regarding new units shipped to Oracle or Oracle customers, returned units (that is, units returned by Oracle for rework) shipped to Oracle or Oracle customers, and corrections to incomplete or inaccurate data from previous submissions.

NOTE 2: There is a **5MB (megabyte) file size limit**. Each traceability file submitted to Oracle must be **smaller than 5 MB**.

1 Technology Options

External suppliers are asked to provide data using a CSV (comma separated value) format

Figure 1-1 Overview of Technical Architecture



1.1 Submission Mechanism and Frequency

The key IT architecture components for data transfer between Oracle and external suppliers are the Internet, Oracle's B2B and Oracle's traceability database.

Using this framework, external suppliers submit and retrieve quality and traceability data by the following method:

1. External suppliers extract data from their IT system and transmit it on a daily basis using either Oracle's B2B infrastructure through unique accounts (that is, exclusive data storage space) assigned to them by Oracle.

NOTE 3: Oracle IT provides Oracle B2B Connectivity instructions to suppliers during supplier setup.

2. Data is subjected to a data validation process before it is successfully loaded on the traceability database.
3. External suppliers receive the acknowledgment file generated by Oracle IT through email.

1.2 File Naming Convention

The file naming conventions are described in Table 1-1, File Naming Conventions, below

Table 1-1 File Naming Conventions

Position	Description	Syntax
1-3	Operational data warehouse	ODW
4-6	Supplier Code	(Provided by Oracle)
7-9	Supplier Location Code	(Provided by Oracle)
10-13	File type	SIMP
14-17	Transmission date – year (must be in current decade)	YYYY (2005)
18-19	Transmission date – month	01: January, 02: February, ..., 12: December
20-21	Transmission date – day of the month	01, ..., 31
22-23	Transmission date – hours	00, ..., 23
24-25	Transmission date – minutes	00, ..., 59
26-27	(Optional) Transmission date – seconds	00, ..., 59
28-31	File suffix	.CSV (NOTE: .CSV must be upper case)

1.2.1 File Naming Example

A file transmitted from Sample Supplier Company (for the San Jose, California location 001) generated at 1:00 pm on September 15, 2021, would have one of the following file names:

ODWSSC001SIMP202109151300.CSV

ODWSSC001SIMP20210915130000.CSV

2 Acknowledgments

After the data has completed the validation process, an acknowledgment (.htm) file is generated and sent through email to the external supplier.

1. Validations verify the completeness and accuracy of the data contained in the file. The checks include:

- validation of file name
- file has not already been processed
- part numbers in the file exist in Oracle's item master
- file contains no duplicate component (child) serial numbers
- all child part and serial numbers in the file report to a parent part and serial number
- valid formatting including null value and field sizes

For more information, refer to *Appendix A Error Messages and IT Validation Checks*.

2. The mechanism for providing feedback from Oracle to external suppliers is the acknowledgment file. This file highlights any error(s) encountered while processing the data feed.
3. External suppliers can expect at least one of the messages described in *Appendix A: Error Messages and IT validations*, for each data feed.
4. External suppliers are expected to correct errors identified in the acknowledgment file and resubmit the data as a regular data feed within the time frame specified in *Supplier Traceability Requirements*, 923-3406.
5. If any element of the data set fails validation, none of the data in the file is loaded.

2.1 Acknowledgment File Format

The ACK suffix is used for all Acknowledgment files.

Table 2-1 Acknowledgment File Format

Field	Description	Type	Maximum Length	Mandatory / Optional/ Conditional
File Name	The name of the data file submitted	VarChar	<31>	Mandatory
Acknowledgment Code	A code describing the Acknowledgment Message (for example, E000 or E010)	VarChar	<4>	Mandatory
Acknowledgment Message	A message indicating validation status	VarChar	<50>	Mandatory

2.2 Sample Acknowledgments

An example of a successful validation acknowledgment file for Sample Supplier Company submitted on August 16, 2021 for the San Jose, California location.

Acknowledgement

OAL - SOA Enterprise Messaging

Supplier Traceability Technical Specifications for Supplier Data Feeds

Files Submitted	
ODWSSC001SIMP202108161301.CSV	
Error Description	Actions
Code: E000 Description: The data feed submitted by the supplier was successfully processed at Oracle Explanation: The data feed submitted by the external supplier was processed and the data contained in the data feed reached Oracle successfully. No action is required at this time.	There are no required actions for this submittal.

An example of a failed validation acknowledgment file for Sample Supplier Company submitted on August 15,2021 for the San Jose, California location.

Acknowledgement

OAL - SOA Enterprise Messaging

Supplier Traceability Technical Specifications for Supplier Data Feeds

Files Submitted	
ODWSSC001SIMP202108151301.CSV	
Error Description	Actions
Code: E003 Description: The part number and serial number combination in a record references a parent part number and serial number combination that does not exist. Alternatively, the part number and serial number combination references itself as its parent. Explanation: The part number(7333484) and serial number(10221432035) combination in file ODWSSC001SIMP202108151301.CSV is referencing a parent part number and serial number combination that does not exist.	1) Modify the file by correcting the Parent Part number and Serial Number for the child Part number and Serial Number combination. 2) Modify the CNTL to reflect the correct sizes of the files. 3) Re-submit the entire set of files to Oracle for re-processing. 4) Monitor the corresponding acknowledgement file to ascertain the file was correctly processed.

3 CSV File Contents

3.1 General

The CSV file contains the part numbers and serial numbers for the systems shipped and their component lower level part numbers and serial numbers (where they exist) in a parent-child structure.

Lower level serial numbers must refer to a parent part and serial number.

Multiple levels are supported by the structure. Typical configuration data are the top level server, chassis reporting to the server, mother board reporting to the chassis, processor reporting to the mother board, multiple DIMMs reporting to the mother board, and multiple hard drives reporting to the chassis.

3.2 Master Record

Each top level serial number has a 'master record' where the top level part number and serial number report to a null part number and serial number. This record indicates that this is the top level and the serial number has no parent.

In the simplest case, where a shipped item has no serialized components, the CSV file consists of only master records. For example, if a shipped power supply was built with no serialized components, there must be a master record for each power supply where the part number and serial number have no parent records.

For a shipped item with one child, as is the case for a SPARC processor as a parent with the internal silicon chip ID as the child, there is one record for each processor as parent to the associated chip, and a second master record for the processor reporting to a null parent. The one child model holds for simple X-options. In this example, a single HDD where the X-option serial number is the parent and the HDD is the child. Each X-option is represented in the file on record as the parent of the HDD child, and with master record where the X-option is the child reporting to a null parent.

A shipped server can have hundreds of serialized child parts in many levels of genealogy, but the CSV file must contain one master record where the top level server serial number reports to a null parent. The file counts the server as one 'thing' shipped (based on the master record count) regardless of the number of child components.

3.3 Device ID

- **Note 4:** Device ID is optional unless Oracle specifically requests it.

DEVICEID is a field used to collect the electronic identifier of a system or component. It was originally designed to contain the Solaris HOSTID or Media Access Control (MAC) address of a system. It was expanded to contain more recently introduced identifiers, such as the World Wide Name (WWN) (an electronic ID for certain types of FibreChannel devices connected to a Storage Area Network [SAN]).

All SPARC processor based systems have a HOSTID; a HOSTID is derived from the system board MAC address. Either the HOSTID or the MAC address is required to be sent in the DEVICEID field for all systems containing a SPARC processor. Every system with an Ethernet port has one or more MAC addresses which uniquely define that port to the world wide web. If a system, X-option, or FRU has an Ethernet port and is not reporting the HOSTID (required for SPARC based system), it must report the MAC address in the DEVICEID field (either in the master record or the record for the child component containing the MAC address). This includes FRUs, X-options, Network Interface Cards (NICs), and so on.

- **Note 5:** Just a Bunch of Disks (JBODs) are exempted because they do not have an Ethernet interface.

3.4 Data Structure of the CSV File

Fields must be populated with the data specified in table 3-1 below. The fields must not exceed the maximum length.

For a sample CSV file see Appendix B.

Table 3-1 CSV Data Fields

Field	Description/Rules	Type	Maximum Length	Mandatory/Optional/Conditional
Supplier Identifier	Oracle must provide a valid identifier to each supplier	VarChar	<3>	Mandatory
Supplier Location Identifier	Oracle must provide a valid list of site identifiers to each supplier - one number for each vendor plant location	VarChar	<3>	Mandatory
Parent Part Number	Oracle part number of parent part of the serialized component part. Null for Master records (top level of shipped BOM).	VarChar	<30>	Conditional
Parent Serial Number	Serial number of parent part of the serialized component part. Null for Master Records (top level of shipped BOM)	VarChar	<50>	Conditional
Component Part Number	Oracle part number of the component (child) manufacturing part	VarChar	<30>	Mandatory
Component Serial Number	Serial number of the component (child) manufacturing part in a valid Oracle format	VarChar	<50>	Conditional
Assembly Date	The date child was assembled to parent yyyyymmdd	VarChar	<8>	Optional
Assembly Time	The time child was assembled to parent hhmmss	VarChar	<6>	Optional
Device ID	A device ID is an electronically readable unique identifier for a particular part. The MAC or Ethernet address is a string of 12 hexadecimal characters from the primary NIC. Provide the MAC address for the system as part of the master record. Provide the MAC for the NIC card as part of the NIC child record. Alternate for FiberChannel or Infiniband devices - can also be the 16-character WWN.	VarChar	<25>	Conditional

Field	Description/Rules	Type	Maximum Length	Mandatory/ Optional/ Conditional
	Alternate for server systems - can also be the 8-character Solaris Host_ID instead of the MAC address. For serialized items which have no MAC or WWN address, leave the field empty null			
Slot ID	Location identifier 1	VarChar	<25>	Conditional
Position ID	Location identifier 2	VarChar	<25>	Conditional
Unit Location	Location identifier 3	VarChar	<25>	Conditional
Return Flag	Oracle returned flag; values are Yes (material was previously shipped to Oracle) or No (new part)	VarChar	<3>	Optional
Accessory (lot code)	Lot code or date code of the component	VarChar	<30>	Conditional
Quantity	Number of components with a specific lot code	Integer	<10>	Optional
Notes: All part numbers must exist in Oracle's ERP. Only one record can exist for each part and serial number combination in this file. It must always be unique. A part or serial number combination cannot have more than one parent. When a component has a lot code and not a serial number, record lot code in the accessory field and leave the component serial number field empty. To indicate the end of a record, the number of comma characters should be one less than number of columns in the CSV file (no comma at the end of the row).				

Appendix A: Error Messages and IT Validation Checks

Error Messages

Code	Description	Action to be taken
E000	The data feed submitted by the supplier was successfully processed at Oracle	There are no required actions for this submittal.
E003	The part number and serial number combination in a record references a parent part number and serial number combination that does not exist. Alternatively, the part number and serial number combination references itself as its parent	Modify the file by correcting the Parent Part number and Serial Number for the child Part number and Serial Number combination.
E004	The part number reported in the data feed does not exist in Oracle's ERP System	<p>1) Please make sure that the correct Part Number is provided.</p> <p>2) If the part number provided to you is correct, contact your supply engineer immediately and ask them to correct this problem</p>
E007	The specified file is already successfully processed or has an invalid file name	<p>1) If files were named incorrectly, change name</p> <p>2) If new data was added, create new files with just the new data and send with new file names.</p>
E010	The part number and serial number combination already exists	Please make sure that duplicate Part number and Serial number combination does not exist in the file. Use the Return Flag to note reused parts
E019	Various format errors including missing value in a mandatory field, exceeding maximum field length (etc)	Recheck all the files and modify them according to the problem
E998	Unexpected failure encountered while processing the data feed. Supplier is expected to recheck the file	Recheck all the files and modify them according to the problem

IT Validation Checks

Data Element or Attribute	Check for Null Value?	Check for Field Size?	Check for Numeric Value?	Check for Valid Date?	Check for Valid Format?	Check for Referential Integrity?
Supplier Identifier	YES	YES	NO	NO	YES	YES
Supplier Location Code	YES	YES	NO	NO	NO	YES
Parent Part Number	YES	YES	NO	NO	NO	YES
Parent Serial Number	YES	YES	NO	NO	NO	NO
Component Part Number	YES	YES	NO	NO	NO	NO
Component Serial Number	YES	YES	NO	NO	NO	NO
Assembly Date	YES	NO	NO	NO	YES	NO
Assembly Time	YES	NO	NO	NO	YES	NO
Device ID	YES	NO	NO	NO	NO	NO
Slot ID	YES	NO	NO	NO	NO	YES
Position ID	YES	NO	NO	NO	NO	NO
Unit Location	YES	YES	NO	NO	NO	NO
ReturnFlag	YES	NO	NO	NO	YES	NO
Lot Code	YES	NO	NO	NO	NO	YES
Quantity	YES	NO	NO	NO	NO	NO

Appendix B: Sample CSV File from Sample Supplier Company

SSC,001,,7090716,1506AA70VX,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,542-0254-
01,341A583DE500000000079C34,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7023333,3X2-P013IN,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7023515,T52A-P00Y1D,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7044130,465824T+1430C32422,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7044130,465824T+1451C32397,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7045042,464507N+15020003WB,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7045042,464507N+15020003WE,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7045042,464507N+15020003WM,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7045042,464507N+15020003X4,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7046442,465774K-1451702047,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7058900,489089M+15054T06AY,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7063607,489089M+15028604AU,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7064129,AST145371JL,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503E0UHGX,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503E35TEX,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503E3A5VX,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503E3Y4ZX,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503E47BJX,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503E4NSBX,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503E4V8KX,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503E4WMSX,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503E4WPEX,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503E50MNX,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503E56DZX,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7066824,464151T-1503EUNT7X,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7069337,489089M+1505CR0076,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7073525,464507N+14460005T5,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7077819,489089M+15056U0022,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7078070,465765N+1506H802R2,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7078070,465765N+1506H802R4,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7078070,465765N+1506H802R6,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7078070,465765N+1506H802R8,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7078071,465765N+1506H60A2T,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7078071,465765N+1506H60A2X,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7078071,465765N+1506H60A30,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7085209,464168V+1502001831,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7086345,464168V+1502002492,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7086648,489089M+15028704AR,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7086753,489089M+15054R064T,20150206,101724,,,N,,1
SSC,001,7090716,1506AA70VX,7090170,881450508478,20150206,101724,,,N,,1

SSC,001,7090716,1506AA70VX,7090698,159048S+1452NG203F,20150206,101724,,,N,,1
 SSC,001,7090716,1506AA70VX,7090698,159048S+1452NG309P,20150206,101724,,,N,,1
 SSC,001,7090716,1506AA70VX,7090698,159048S+1452NG309Q,20150206,101724,,,N,,1
 SSC,001,7090716,1506AA70VX,7090698,159048S+1452NG30RE,20150206,101724,,,N,,1
 SSC,001,7090716,1506AA70VX,7091185,AST70911851446009H,20150206,101724,,,N,,1
 SSC,001,7090716,1506AA70VX,7095102,2W437068A1535,20150206,101724,,,N,,1
 SSC,001,7090716,1506AA70VX,7095102,2W438010A3096,20150206,101724,,,N,,1
 SSC,001,7090716,1506AA70VX,7095754,489089M+150389056P,20150206,101724,,,N,,1
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 SSC,001,7090716,1506AA70VX,7098504,489089M+15054S08U5,20150206,101724,,,N,,1
 SSC,001,7090716,1506AA70VX,7078071,465765N+1506H60A2V,20150206,101724,,,N,,1
 SSC,001,7090716,1506AA70VX,7095754,,20150206,101724,,,N,123456,1
 SSC,001,,,371-4522-02,,,,,,0407T00-1327145207,1
 SSC,001,,,371-4522-02,,,,,,0407T00-132814599C,1
 SSC,001,,,371-4522-02,,,,,,0407T00-1327145533,1
 SSC,001,,,371-4522-02,,,,,,0407T00-1327145355,1

Appendix C: Special file structure for PCA components

When requested by Oracle or by Oracle's suppliers, PCA manufacturers may be required to collect and send component data. The data can include serial numbers, lot codes, date codes or the PCA manufacturer's applied code. This data can be required for components that may or may not be serial controlled.

The following describes how to load and structure such data in the CSV file:

Component Data	How to enter it into the csv data file
If there is a serial number	Enter the serial number in the serial number column
If there is a lot code instead of a serial number	Enter the lot code in the accessory column. Leave the serial number column blank.
If there is a lot code and a date code	Enter the lot code in the accessory column and the date code in the deviceID column. Leave the serial number column blank.
If there is a lot code, date code and a PCA manufacturer code	Enter the lot code in the accessory column, the date code in the device ID column and the PCA manufacturer code in the slot ID column. Leave the serial number column blank.

If there is a lot code, no date code and a PCA manufacturer code	Enter the lot code in the accessory column and PCA manufacturer code in the slot ID column. Leave the device ID and the serial number columns blank.
If there is a date code and a PCA manufacturer code but no lot code	Enter the word " placeholder " in the accessory column, the date code in the device ID column and the PCA manufacturer code in the slot ID column. Leave the serial number column blank.
If there is only a PCA manufacturer code (no serial number, lot code or date code)	Enter the word " placeholder " in the accessory column. Enter the PCA manufacturer code in the slot ID column. Leave the serial number and device ID columns blank.

Reference Information

Reference Documents and Records

Document Title	Number
<i>Supplier Traceability Requirements</i>	923-3406

Document History and Approvals

Rev	Date	Description of Change	Originator
01	10 Dec 2015	Initial release.	N/A
02	21 Apr 2016	Table 1-1: added note that .CSV must be upper case. Table 3-1: clarified Accessory (lot code) and modified component serial number from mandatory to conditional. Appendix B: corrected site location and added sample data for lot code.	N/A
03	15 May 2017	Removed "(quote mark) from Appendix B	N/A

Fusion History

04	10 May 2021	Format changes only: Updated title. Removed references to Beehive Online. Updated titles for reference documents 923-3407, 9233409, 923-3406.	N/A
05	24 Jan 2022	Added new note on 5MB file size. Updated confidentiality statement to Oracle Restricted. Updated ESO beehive alias for questions to eso_business_docs_us_grp@oracle.com	N/A
06	14 Jul 2022	Updated the example company name in sections 1.2.1, 2.2 and appendix B from Acme Electronics to Sample Supplier Company.	N/A
07	21 Sep 2022	Update IT Validation date checks for component part	N/A

		number and position ID to no. Added note 4 (optional) to section 3.3 Device ID.	
08	26 June 2023	Added appendix C. Removed references to 923-3407 Supplier Traceability Data, XML Data Feed Format.	N/A
09	05 June 2023	Update appendix C: when PCA mfg code only use placeholder in Accessory column, PCA mfg code in slot id and leave serial number, device id columns blank.	N/A
10	10 Aug 2023	Correct typos; no content change	N/A
11	Mar 28, 2025	Corrected appendix C, 4 th line, in the 'how to' column to "...and the PCA manufacturer code in the slot ID column. Leave the serial number column blank."	N/A
12	May 19, 2025	Removed reference to 923-3409 throughout. Updated figure 1-1 Technical Architecture.	N/A

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