Connex Import And Export File Specification
(revised February, 2018)

General

This document describes details for files used to import and export data with Connex.

File Format

The import and export files are Comma-Separated Variable (CSV) files. For documentation purposes, each line of the files will be referred to as a record. More specifically, a record begins on a new line, data following ASCII carriage returns (0x0D) or ASCII carriage return/line feed (0x0D/0x0A) combos. The same record ends at the next new line.

Additionally, blank lines are ignored and lines beginning with the pound symbol, #, are ignored. This mechanism may be used to add comments to the import file.

Import Files

There are two types of import files required, the import header and data files.

Import Data File Arbitration

The mechanism for import data file arbitration will be handled as follows:

- At time of creation of import data, the import device will search the import data file. If not found, import device creates this file and adds the desired import records. Otherwise, the import device must either attempt to append the existing file with the new import records or wait until the import data file is removed by Connex.
- Upon an import event at Connex, Connex will attempt to rename the import data file. Upon success, Connex reads and processes the renamed import data file, then deletes it. Upon failure, due to the possibility of the import device having the file opened or the file is nonexistent, Connex will not process file and wait for the next import event to try again.

Import Data File Contents

The import data file contains the specific data records to import. The first field of an import record is the import command, followed by the data fields specific to the command. The following table describes all the possible import commands and their syntax:

Command/Description	***Syntax***
Import Job: Instructs Connex to import a Job.[1]	J, (field), (field), (field), ...
Import Batch: Instructs Connex to import a Batch to be included into the last imported Job.[1]	B, (field), (field), (field), ...
Import Part: Instructs Connex to import a Part.[1]	P, (field), (field), (field), ...
Import Operation: Instructs Connex to import an Operation to be included into the last imported Part.[1]	O, (field), (field), (field), ...
Import Sub Part: Instructs Connex to take operations from an existing part and put them in this new part on leading or trailing edge with an optional offset.	A, (field), (field), (field), ...
Import Folder Part: Instructs Connex to import a Folder Part.[1]	FOLDER_PART, (field), (field), (field), ...
Import Folder Operation: Instructs Connex to import a Folder Operation to be included into the last imported Folder Part.[1]	FOLDER_OPERATION, (field), (field), (field), ...
Import Coil: Instructs Connex to import a Coil.[1]	C, (field), (field), (field), ...
Import Machine: Instructs Connex to import a Machine definition.[1]	M, (field), (field), (field), ...
Import Material: Instructs Connex to import a Material definition.[1]	L, (field), (field), (field), ...
Import Profile: Instructs Connex to import a Profile definition.[1,5]	F, (field), (field), (field), ...

Command/Description	*Syntax*
Import Profile Machine: Instructs Connex to import a Profile Machine definition to be included into the last imported Profile.[1]	H, (machine) H, (machine)

[1]Note: This command has a variable number of fields to follow the import command. Use of this command requires a corresponding record entry in the import header file. This header entry instructs Connex of which, and the order of, fields to expect in the import data entry.
[2]Note: These commands produce IMPORT COMMAND RESULT production records in the export file when exporting is enabled in Connex.
[3]Note: This command requires a job name in the field following the command.
[4]Note: This command has no fields to follow the import command.
[5]Note: The Machines to assign to this Profile must follow the last field defined in the Profile header record.

Job/Batch and Part/Operation Record Correlations

Since Jobs and Batches are correlated, more specifically, every Batch is tied to a Job; the way the correlation is specified is by the order of the Job/Batch records. Each Job record must be followed by all of the Batch records corresponding to that Job. Similarly, each Part record must be followed by all of the Operation records corresponding to that Part.

Temporary Parts

Temporary Parts provides a mechanism in which an import may generate custom parts on-the-fly for Batches. These parts are referred to as Temporary Parts. The process for defining a Temporary Part is the same as regular Parts, which is using the Part and Operation import records, with one exception. The PART field of the Temporary Part import record must be named "#".

In order for a Batch to use a Temporary Part, the import entries for the Temporary Part, and its Operations, must immediately preceed the import entry for the Batch. Furthermore, the Part specified in the Batch import entry must be named "#".

Upon importation of a Temporary Part, Connex will uniquely rename the Temporary Part. Further Connex will change the Part in which the following Batch uses to that name as well.

Upon deletion of the Job or Batch, in Connex, that uses the Temporary Part, the temporary Part will be removed from memory as well.

Import Header File Arbitration

The mechanism for file arbitration will be handled as follows:

◆ At time of creation of import data, this file should be created or updated only after the previous import data file has been deleted and before the import device creates the next import data file. If this is the first importation, then the import data file should not exist and the import devices is free to create or update the import header file any time before creating the first import data file.

◆ Connex will only read this file. Therefore, no arbitration is necessary.

Import Header File Contents

The import header file contains records that describe which, and the order of, data fields that are contained in certain import data file records. The import header file will be typically defined once throughout the life of Connex. Exceptions would be if that the importing device needs to change the order of or the data fields that it imports.

The syntax for a header entry is similar to a data entry in the import data file. The first field is the import command, followed by the names of the data fields that will be used in the import data files. The following tables describe the fields available for each import command:

Available Import Job Fields

Field Name	*Description*	*Field Data Type*
JOB	Job name	Alphanumeric, up to 16 characters
PROFILE	Profile name	Alphanumeric, up to 24 characters
MATERIAL	Material name	Alphanumeric, up to 24 characters
MACHINE	Machine name	Alphanumeric, up to 24 characters
LOCATION	Physcial location of the job	Alphanumeric, must be predefined in Connex
USER 1	User defined field 1	Alphanumeric. The sum of lengths of all the job user defined fields may be up to 360 characters. The sum total may come from any combination of field(s).
USER 2	User defined field 2	USER 1
USER 3	User defined field 3	USER 1
USER 4	User defined field 4	USER 1
USER 5	User defined field 5	USER 1
USER 6	User defined field 6	USER 1
USER 7	User defined field 7	USER 1
USER 8	User defined field 8	USER 1
USER 9	User defined field 9	USER 1
USER 10	User defined field 10	USER 1
SCHEDULE	Automatic download schedule time	MM/DD/YYYY/hh/mm/ss[1]

Available Import Batch Fields

Field Name	*Description*	*Field Data Type*
BATCH	Batch name	Alphanumeric, up to 4 characters, typically numeric text
QUANTITY	Number of pieces to produce	Numeric, unsigned integer, 0 – 9999
LENGTH	Length of pieces to produce	Numeric, unsigned fixed point, 0.000 – 2000.000 inches
PART	Part name to use	Alphanumeric, up to 6 characters. Leave empty or set to "0" if not using Parts.
USER 1	User defined field 1	Alphanumeric. The sum of lengths of all the batch user defined fields may be up to 180 characters. The sum total may come from any combination of field(s).
USER 2	User defined field 2	USER 1
USER 3	User defined field 3	USER 1
USER 4	User defined field 4	USER 1
USER 5	User defined field 5	USER 1

Available Import Part Fields

Field Name	*Description*	*Field Data Type*
PART	Part name	Alphanumeric, up to 6 characters. Part names begining with the symbol '#' are not allowed. Those names are reserved for Temporary Parts.
DESCRIPTION	Part description	Alphanumeric, up to 40 characters

Available Import Operation Fields

Field Name	*Description*	*Field Data Type*
OPERATION	Operation name (Tool Definition)	Alphanumeric, up to 4 characters
POSITION	Operation location on Part	Numeric, unsigned fixed point, 0.000 – 2000.000 inches
REFERENCE	Where POSITION is referenced from	Enumerated text strings, the following choices are available: LEADING EDGE TRAILING EDGE LEADING CENTER TRAILING CENTER SPACING START EVEN SPACING SPACING END CONTINUOUS CONTINUOUS REF NESTED RIGHT LEADING EDGE NESTED RIGHT TRAILING EDGE NESTED RIGHT LEADING CENTER NESTED RIGHT TRAILING CENTER NESTED LEFT LEADING EDGE NESTED LEFT TRAILING EDGE NESTED LEFT LEADING CENTER NESTED LEFT TRAILING CENTER NESTED ALTERNATING
YPOS	Y-Location on Part	Numeric, signed, -100.000 – 100.000 inches

Available Sub Part Fields

Field Name	*Description*	*Field Data Type*
PART	Existing Part Name	Alphanumeric, up to 40 characters
X_OFFSET	(optional) amount to add to X dimensions	Numeric, unsigned floating point inches
Y_OFFSET	(optional) amount to add to Y dimensions	Numeric, unsigned floating point inches
REFERENCE	(optional)Reference point	Enumerated text strings, the following choices are available: LEADING EDGE TRAILING EDGE

Available Import Folder Part Fields

Field Name	*Description*	*Field Data Type*
NAME	Folder Part name	Alphanumeric, up to 40 characters. Part names begining with the symbol '#' are not allowed. Those names are reserved for Temporary Parts.
DESCRIPTION	Folder Part description	Alphanumeric, up to 40 characters
CLAMP_PRESSURE	Folder Part clamp pressure	Numeric, unsigned fixed point, psi
OVERBEND	Folder Part over bend	Numeric, integer
MATERIAL_THICKNESS	Folder Part material thickness	Numeric, unsigned fixed point, inches
PAINT_DIRECTION	Folder Part paint direction	Numeric, 0 or 1, 0 = Paint Down, 1 = Paint Up
MATERIAL	Folder Part Material	Alphanumeric up to 24 characters

Available Import Folder Operation Fields

Field Name	*Description*	*Field Data Type*
STEP	Folder Operation step	Numeric, unsigned integer
BACKGAUGE2	Folder Operation back gauge 2	Numeric, signed fixed point
BACKAUGE	Folder Operation back gauge	Numeric, signed fixed point
CLAMP_PRESSURE	Folder Operation clamp pressure	Numeric, fixed point, psi.
BEND_ANGLE	Folder Operation bend angle	Numeric, signed integer
OVERBEND	Folder Operation over bend	Numeric, signed integer
UPPER_JAW	Folder Operation upper jaw	Numeric, signed fixed point
BUMP_BEND_ANGLE	Folder Operation bump bend angle	Numeric, signed integer
BUMP_BEND_RADIUS	Folder Operation bump bend radius	Numeric, signed fixed point, inches
BUMP_BEND_ITERATIONS	Folder Operation bump bend iterations	Numeric, signed integer
ROTARY_SHEAR	Folder Operation rotary shear	Numeric, signed fixed point
FLIP	Folder Operation flip	Boolean, true or false True = Flip False = No Flip
HELI_ROTATE	Folder Operation heli rotate	Boolean, true or false True = Rotate Heli False = Do not rotate Heli
PROP_ROTATE	Folder Operation prop rotate	Boolean, true or false True = Rotate Prop False = Do not rotate Prop
BG_ADJUST	Folder Operation back gauge adjust	Numeric, signed fixed point

Available Import Coil Fields

Field Name	*Description*	*Field Data Type*
COIL	Coil name	Alphanumeric, up to 24 characters
MATERIAL	Material name	Alphanumeric, up to 24 characters
RECEIVED	Date coil received	MM/DD/YYYY[1]
STATUS	Status of coil	Enumerated text strings, the following choices are available: AVAILABLE DEPLETED HOLD
VENDOR	Where coil was purchased from	Alphanumeric, up to 255 characters
WEIGHT	Entire weight of coil	Numeric, unsigned floating point pounds
LENGTH	Length of coil	Numeric, unsigned floating point feet
GRADE	Quality grade of coil	Enumerated text strings, the following choices are available: PREMIUM SECONDS
COST	Cost of the coil	Numeric, unsigned floating point
LOCATION	Physical location of coil	Alphanumeric, must be predefined in Connex
NOTES		Alphanumeric, up to 255 characters

Available Import Material Fields

Field Name	*Description*	*Field Data Type*
MATERIAL	Material name	Alphanumeric, up to 24 characters
GAUGE	Material's gauge/thickness	Numeric, unsigned integer, 0 - 255
THICKNESS	Material's gauge/thickness	Numeric, unsigned floating point inches
WIDTH	Material's width	Numeric, unsigned floating point inches
COLOR	Material's color	Alphanumeric, up to 24 characters
DENSITY	Material's lineal density	Numeric, unsigned floating point pounds per feet
DESCRIPTION	Description for material	Alphanumeric, up to 36 characters

Available Import Profile Fields

Field Name	*Description*	*Field Data Type*
PROFILE	Profile name	Alphanumeric, up to 24 characters
DESCRIPTION	Description for material	Alphanumeric, up to 36 characters

Available Import Profile Machine Fields

Field Name	*Description*	*Field Data Type*
MACHINE	Machine name	Alphanumeric, up to 24 characters

[1]Note: Date time format where:
MM = month of year, 01 - 12
DD = day of month, 01 - 31
YYYY = year
hh = hour, 00 - 23
mm =minutes, 00 - 59
ss = seconds, 00 – 59

Import File Examples

Simple Example

Import Header File Contents:

```
J,JOB,PROFILE,MATERIAL
B,BATCH,QUANTITY,LENGTH
```

Import Data File Contents:

```
J,XYZ Construction,3-1/2" Stud,20GA
B,1,500,96.000
B,1,27,108.125
B,1,500,120.500
J,110-22-222,5" Track,16GA
B,1,500,96.000
```

Full Featured Example

Import Header File Contents:

```
# Import Material Record Header
L,MATERIAL,GAUGE,THICKNESS,WIDTH,COLOR,DENSITY,DESCRIPTION

# Import Profile Record Header
F,PROFILE,DESCRIPTION
H,MACHINE
H,MACHINE

# Import Coil Record Header
C,COIL,MATERIAL,RECEIVED,STATUS,VENDOR,WEIGHT,LENGTH,GRADE,NOTES

# Import Part/Operation Record Headers
P,PART,DESCRIPTION
O,OPERATION,POSITION,REFERENCE,YPOS

# Import Job/Batch Record Headers
J,JOB,MACHINE,SCHEDULE,MATERIAL,PROFILE,USER 1,USER 2,USER 3
B,BATCH,QUANTITY,LENGTH,PART

# Import Folder Part/Folder Operation
FOLDER_PART,NAME,DESCRIPTION,CLAMP_PRESSURE,OVERBEND,MATERIAL_THICKNESS,PAINT_DIRECTION
,MATERIAL
FOLDER_OPERATION,STEP,BACKGAUGE2,BACKGAUGE,CLAMP_PRESSURE,BEND_ANGLE,OVERBEND,UPPER_JAW
,BUMP_BEND_ANGLE,BUMP_BEND_RADIUS,BUMP_BEND_ITERATIONS,ROTARY_SHEAR,FLIP,HELI_ROTATE,PR
OP_ROTATE,BG_ADJUST
```

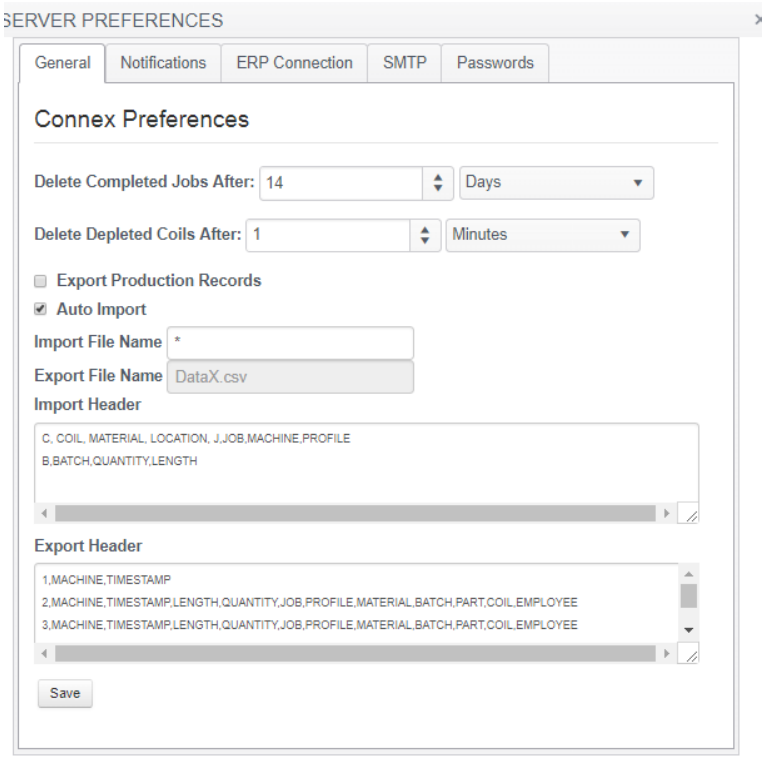
Import Data File Contents:

```
# Import Materials
L,Red 42-030,30,,42,Red,1.988,"Red 42 IN wide, 30 GA"
L,White 42-030,30,,42,White,1.988,"White 42 IN wide, 30 GA"
L,White 42-026,26,,42,White,2.125,"White 42 IN wide, 26 GA"
L,Red Iron 16-016,16,,16,Red,2.375,"Red Iron 16 IN wide, 16 GA"
L,Red Iron 16-014,14,,16,Red,2.55,"Red Iron 16 IN wide, 14 GA"
L,CRS 25-625,25,,6.25,Grey,0.604,"CRS 25 GA 6-1/4 IN, 3-1/2 IN stud"
L,CRS 25-550,25,,5.5,Grey,0.531,"CRS 25 GA 5-1/2 IN, 3-1/2 IN track"
L,CRS 20-625,20,,6.25,Grey,0.637,"CRS 20 GA 6-1/4 IN, 3-1/2 IN stud"
L,CRS 20-900,20,,9,Grey,0.956,"CRS 20 GA 9 IN, 6 IN stud"
L,CRS 20-800,20,,8,Grey,0.85,"CRS 20 GA 8 IN, 6 IN track"

# Import Profiles
F,R-Panel,24,36,
H,R-Panel
F,Flat Sheets,36,48,
H,R-Panel
F,Cee Purlin,12,24,
H,Purlin Line
F,Zee Purlin,12,24,
H,Purlin Line
F,3-1/2" Stud,3.5,36,
H,Drywall Stud
H,Purlin Line
H,Structural Stud
F,3-1/2" Track,3.5,36,
H,Drywall Stud
F,6" Stud,6,48,
H,Structural Stud
F,6" Track,6,36,
H,Structural Stud

# Import Coil Record Data
C,112-W,White 42-030,11/04/2013,AVAILABLE,Coils-Are-Us,725,500,PREMIUM,New coil
C,113-R,Red Iron 16-014,11/04/2013,AVAILABLE,Coils-Are-Us,1000,750,SECONDS,New coil

# Import Part/Operation Record Data
P,24,24" Centered Studs
O,2,24.000,SPACING START
O,2,24.000,EVEN SPACING
O,2,24.000,SPACING END
P,12C,12" Continuous
O,2,12.000,CONTINUOUS
P,505,Standard Lap
O,2,2.000,LEADING EDGE
O,3,4.000,LEADING EDGE
O,4,6.000,LEADING EDGE
O,5,8.000,LEADING EDGE
O,6,10.000,LEADING EDGE
O,8,0.000,LEADING CENTER
O,2,10.000,TRAILING EDGE
O,3,8.000,TRAILING EDGE
O,4,6.000,TRAILING EDGE
O,5,4.000,TRAILING EDGE
O,6,2.000,TRAILING EDGE
```

```
# Import Folder Part/Folder Operation Data.
FOLDER_PART,CANOPY-PANEL,19,1500.00000,8,0.03998,UP,
FOLDER_OPERATION,0,18.99994,18.99994,0.00000,0,0,0.70000,0,0.00000,0,200.00000,NO,NO,NO
,0.00000
FOLDER_OPERATION,1,18.24994,18.24994,0.00000,90,0,0.70000,0,0.00000,0,0.00000,NO,NO,NO,
0.00000
FOLDER_OPERATION,2,17.19994,17.19994,0.00000,90,0,0.70000,0,0.00000,0,0.00000,NO,NO,NO,
0.00000
FOLDER_OPERATION,3,14.36995,14.36995,0.00000,95,0,0.70000,0,0.00000,0,0.00000,NO,NO,YES
,0.00000
FOLDER_OPERATION,4,1.54999,1.54999,0.00000,90,0,0.70000,0,0.00000,0,0.00000,NO,NO,NO,0.
00000
FOLDER_OPERATION,5,0.59998,0.59998,0.00000,85,0,2.00000,0,0.00000,0,0.00000,NO,NO,NO,0.
00000
FOLDER_OPERATION,6,2.81998,2.81998,0.00000,90,0,2.00000,0,0.00000,0,0.00000,NO,NO,NO,0.
00000
FOLDER_PART,DOOR-TRIM SHOW,,1500.00000,5,0.01999,DOWN,
FOLDER_OPERATION,0,6.87500,6.87500,0.00000,0,0,0.70000,0,0.00000,0,10.00000,NO,NO,NO,0.
00000
FOLDER_OPERATION,1,6.37500,6.37500,0.00000,140,0,0.70000,0,0.00000,0,0.00000,NO,NO,NO,0
.00000
FOLDER_OPERATION,2,5.37500,5.37500,0.00000,90,5,0.70000,0,0.00000,0,0.00000,NO,NO,NO,0.
00000
FOLDER_OPERATION,3,3.87500,3.87500,0.00000,90,7,0.70000,0,0.00000,0,0.00000,NO,NO,NO,0.
00000

# Import Job/Batch Record Data.
# Note: This Job is not scheduled for downloading since that field is left blank.
J,PO 12345,R-Panel,,White 42-030,R-Panel,ABC Construction,12345 First St, "Anywhere, AK
76654"
B,1,1000,96.000,24
B,1,1000,48.000,0
B,1,1000,24.000,0
B,2,500,120.000,24
B,2,250,36.000,0
B,2,250,72.000,12C
J,PO 12346,Purlin Line,,CRS 20-900,Cee Purlin,Buildings-R-Us,203 Maple Dr, "Anywhere,
AZ 49624"
B,1,1000,12.500,0
B,1,1000,18.125,505
B,1,1000,24.000,505

# Import Job/Batch Record Data, that uses a Temporary Parts
# Note: This Job is will be scheduled for downloading immediately since that field is
dated in the past.
J,PO 12357,Purlin Line,01/03/2014/00/00/00,Red Iron 16-014,Zee Purlin,Fab
Buildings,38345 Long St, "Nowhere, ND 74889"
P,#,First Temporary Part
O,2,16.000,SPACING START
O,2,16.000,EVEN SPACING
O,2,16.000,SPACING END
B,1,25,120.000,#
P,#,Second Temporary Part
O,2,22.000,SPACING START
O,2,22.000,EVEN SPACING
O,2,22.000,SPACING END
B,1,10,144.000,#

# Import Job/Batch Record Data
J,PO 12349,Purlin Line,06/01/2014/13/00/00,Red Iron 16-014,Zee Purlin,Bldgs-R-Us,4507
Maple Dr, "Anywhere, AL 39651"
B,1,1000,16.000,0
B,1,1000,48.000,0
B,2,500,24.000,12C
```

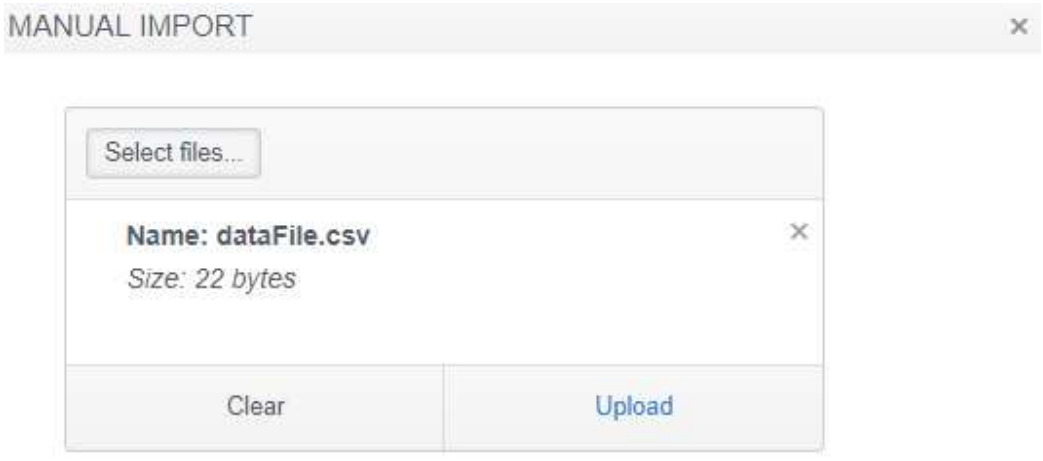
Importing to Connex

Under Server Preferences, create the headers you want to import.



Select the .csv file you want to upload. This example for a coil is saved in an excel document

A	B	C	D
C	c123	26Red	Chicago



Since this was a coil, the data is now available on the coil screen.

Export Files

There are two types of export files required, the export header and data files.

Export Header File

The export header file contains records that describe which, and the order of, data fields to be placed in the export data file records. There must be a single record in the export header file for each record type. The mechanism for file arbitration will be handled as follows:

- This file must only be created or updated by the export device when Connex is not executing.

Export Data File

The export data file contains the specific data records for exportation. The mechanism for file arbitration will be handled as follows:

- Upon an export event at Connex, Connex will search for the export data file. If not found, Connex creates this file and adds the desired export records. Otherwise, Connex will either attempt to append the existing file with the new export records or wait until the export data file is removed by the export device.

- Upon an export event at the export device, the export device will attempt to rename the export data file. Upon success, the export device reads and processes the renamed export data file, then deletes it. Upon failure, due to the possibility of Connex having the file opened or the file is nonexistent, the export device will not process the file and wait for the next export event to try again.

Available Export Record Types

Record Type	***Name***	***Description***
1	Enter Run	Generated when the production line is started for any reason.
2	Exit Run	Generated when the production line is stopped for any reason.
3	Item Data	Generated upon completion of production at the production line.
4	Coil Change	Generated when a coil change takes place at the line.
5	Manual Shear	Generated when a manual shear operation takes place at the production line.
6	Quantity Adjust	Generated when an operator overrides production quantities by pressing “1-Extra“ “1-Less“ buttons on Sierra controller.
9	Message	Generated when a warning or error message is displayed on the controller
B	Scrap Code	Generated when scrap is created
C	Delay Code	Generated when a delay reason is entered into the controller
D	Job Complete	Generated when all of a Job’s batches are completed

Available Enter Run Fields

Field Name	***Description***	***Field Data Type***
TIMESTAMP	Date and time of action that caused this event.	MM-DD-YYYY hh:mm:ss[1]
TIMESTAMPSC	Same as TIMESTAMP field but with / delimeter on the date	MM/DD/YYYY hh:mm:ss[1]
DOWN_TIME	Amount of time the line was halted in seconds	Integer in seconds
MACHINE	Name of production line that caused this event.	Alphanumeric, up to 24 characters

Available Exit Run Fields

Field Name	*Description*	*Field Data Type*
TIMESTAMP	Date and time of action that caused this event.	MM/DD/YYYY hh:mm:ss[1]
TIMESTAMPSC	Same as TIMESTAMP field but with / delimeter on the date	MM/DD/YYYY hh:mm:ss
MACHINE	Name of production line that caused this event.	Alphanumeric, up to 24 characters
LENGTH	Length of pieces produced	Numeric, unsigned fixed point, 0.000 – 2000.000 inches
QUANTITY	Number of pieces produced	Numeric, unsigned integer, 0 – 9999
JOB	Job name	Alphanumeric, up to 16 characters
PROFILE	Profile name	Alphanumeric, up to 24 characters
MATERIAL	Material name	Alphanumeric, up to 24 characters
BATCH	Batch name	Alphanumeric, up to 4 characters, typically numeric text
PART	Part name used	Alphanumeric, up to 6 characters. "0" indicates no Part used, shear only.
PROFILE	Profile name	Alphanumeric, up to 24 characters
COIL	Coil name	Alphanumeric, up to 24 characters
COIL_MATERIAL	The material of the coil that is currently loaded in the Controller as assigned in Connex	Alphanumeric, up to 20 characters
UP_TIME	Amount of time the line was running in seconds	Integer in seconds
JUDF1	Job User defined field 1	Alphanumeric. The sum of lengths of all the batch user defined fields may be up to 180 characters. The sum total may come from any combination of field(s).
JUDF2	Job User defined field 2	USER 2
JUDF3	Job User defined field 3	USER 3
JUDF4	Job User defined field 4	USER 4
JUDF5	Job User defined field 5	USER 5
JUDF6	Job User defined field 6	USER 6
JUDF7	Job User defined field 7	USER 7
JUDF8	Job User defined field 8	USER 8
JUDF9	Job User defined field 9	USER 9
JUDF10	Job User defined field 10	USER 10
UDF1	Batch User defined field 1	Alphanumeric. The sum of lengths of all the batch user defined fields may be up to 180 characters. The sum total may come from any combination of field(s).
UDF2	Batch User defined field 2	USER 1
UDF3	Batch User defined field 3	USER 1
UDF4	Batch User defined field 4	USER 1
UDF5	Batch User defined field 5	USER 1
EMPLOYEE	Employee Number	Numeric, unsigned integer, 0 – 9999

Available Item Data Fields

Field Name	*Description*	*Field Data Type*
TIMESTAMP	Date and time of action that caused this event.	MM/DD/YYYY hh:mm:ss[1]
TIMESTAMPSC	Same as TIMESTAMP field but with / delimeter on the date	MM/DD/YYYY hh:mm:ss
MACHINE	Name of production line that caused this event.	Alphanumeric, up to 24 characters
LENGTH	Length of pieces produced	Numeric, unsigned fixed point, 0.000 – 2000.000 inches
QUANTITY	Number of pieces produced	Numeric, unsigned integer, 0 – 9999
JOB	Job name	Alphanumeric, up to 16 characters
PROFILE	Profile name	Alphanumeric, up to 24 characters
MATERIAL	Material name	Alphanumeric, up to 24 characters
BATCH	Batch name	Alphanumeric, up to 4 characters, typically numeric text
PART	Part name used	Alphanumeric, up to 6 characters. "0" indicates no Part used, shear only.
COIL	Coil name	Alphanumeric, up to 24 characters
COIL_MATERIAL	The material of the coil that is currently loaded in the Controller as assigned in Connex	Alphanumeric, up to 20 characters
JUDF1	Job User defined field 1	Alphanumeric. The sum of lengths of all the batch user defined fields may be up to 180 characters. The sum total may come from any combination of field(s).
JUDF2	Job User defined field 2	USER 2
JUDF3	Job User defined field 3	USER 3
JUDF4	Job User defined field 4	USER 4
JUDF5	Job User defined field 5	USER 5
JUDF6	Job User defined field 2	USER 6
JUDF7	Job User defined field 2	USER 7
JUDF8	Job User defined field 2	USER 8
JUDF9	Job User defined field 2	USER 9
JUDF10	Job User defined field 2	USER 10
UDF1	Batch User defined field 1	Alphanumeric. The sum of lengths of all the batch user defined fields may be up to 180 characters. The sum total may come from any combination of field(s).
UDF2	Batch User defined field 2	USER 1
UDF3	Batch User defined field 3	USER 1
UDF4	Batch User defined field 4	USER 1
UDF5	Batch User defined field 5	USER 1
EMPLOYEE	Employee Number	Numeric, unsigned integer, 0 – 9999

Available Coil Change Fields

Field Name	*Description*	*Field Data Type*
TIMESTAMP	Date and time of action that caused this event.	MM/DD/YYYY hh:mm:ss[1]
TIMESTAMPSC	Same as TIMESTAMP field but with / delimeter on the date	MM/DD/YYYY hh:mm:ss
MACHINE	Name of production line that caused this event.	Alphanumeric, up to 24 characters
MATERIAL	Material name	Alphanumeric, up to 24 characters
NEW COIL	New coil name	Alphanumeric, up to 24 characters
PREVIOUS COIL	Previous coil name	Alphanumeric, up to 24 characters
DESTINATION	Destination of previous coil	Enumerated text strings, the following selections are possible: DEPLETED INVENTORY

Available Manual Shear Fields

Field Name	*Description*	*Field Data Type*
TIMESTAMP	Date and time of action that caused this event.	MM/DD/YYYY hh:mm:ss[1]
TIMESTAMPSC	Same as TIMESTAMP field but with / delimeter on the date	MM/DD/YYYY hh:mm:ss
MACHINE	Name of production line that caused this event.	Alphanumeric, up to 24 characters
SCRAP	Scrap generated	Numeric, unsigned fixed point, 0.000 – 2000.000 inches
COIL	Coil name	Alphanumeric, up to 24 characters
EMPLOYEE	Employee Number	Numeric, unsigned integer, 0 – 9999

Available Quantity Adjust Fields

Field Name	*Description*	*Field Data Type*
TIMESTAMP	Date and time of action that caused this event.	MM/DD/YYYY hh:mm:ss[1]
TIMESTAMPSC	Same as TIMESTAMP field but with / delimeter on the date	MM/DD/YYYY hh:mm:ss
MACHINE	Name of production line that caused this event.	Alphanumeric, up to 24 characters
LENGTH	Length of pieces produced	Numeric, unsigned fixed point, 0.000 – 2000.000 inches
QUANTITY	Number of pieces produced	Numeric, **signed** integer, -9999 to 9999
JOB	Job name	Alphanumeric, up to 16 characters
PROFILE	Profile name	Alphanumeric, up to 24 characters
MATERIAL	Material name	Alphanumeric, up to 24 characters
BATCH	Batch name	Alphanumeric, up to 4 characters, typically numeric text
PART	Part name used	Alphanumeric, up to 6 characters. "0" indicates no Part used, shear only.
PROFILE	Profile name	Alphanumeric, up to 24 characters
COIL	Coil name	Alphanumeric, up to 24 characters
JUDF1	Job User defined field 1	Alphanumeric. The sum of lengths of all the batch user defined fields may be up to 180 characters. The sum total may come from any combination of field(s).
JUDF2	Job User defined field 2	USER 2
JUDF3	Job User defined field 3	USER 3
JUDF4	Job User defined field 4	USER 4
JUDF5	Job User defined field 5	USER 5
JUDF6	Job User defined field 2	USER 6
JUDF7	Job User defined field 2	USER 7
JUDF8	Job User defined field 2	USER 8
JUDF9	Job User defined field 2	USER 9
JUDF10	Job User defined field 2	USER 10
EMPLOYEE	Employee Number	Numeric, unsigned integer, 0 – 9999

Available Machine Message Fields

Field Name	*Description*	*Field Data Type*
TIMESTAMP	Date and time of action that caused this event.	MM-DD-YYYY hh:mm:ss[1]
TIMESTAMPSC	Same as TIMESTAMP field but with / delimeter on the date	MM/DD/YYYY hh:mm:ss[1]
MESSAGE	Message that was displayed	Alphanumeric
MACHINE	Name of production line that caused this event.	Alphanumeric, up to 24 characters

Available Scrap Reason Fields

Field Name	*Description*	*Field Data Type*
TIMESTAMP	Date and time of action that caused this event.	MM-DD-YYYY hh:mm:ss[1]
TIMESTAMPSC	Same as TIMESTAMP field but with / delimeter on the date	MM/DD/YYYY hh:mm:ss[1]
DOWN_TIME	Amount of time the line was halted in seconds	Integer in seconds
SCRAP_CODE	Scrap Code Number	Integer
LENGTH	Length of pieces produced	Numeric, unsigned fixed point, 0.000 – 2000.000 inches
QUANTITY	Number of pieces produced	Numeric, unsigned integer, 0 – 9999
COIL	Coil name	Alphanumeric, up to 24 characters
MACHINE	Name of production line that caused this event.	Alphanumeric, up to 24 characters

Available Delay Reason Fields

Field Name	*Description*	*Field Data Type*
TIMESTAMP	Date and time of action that caused this event.	MM-DD-YYYY hh:mm:ss[1]
TIMESTAMPSC	Same as TIMESTAMP field but with / delimeter on the date	MM/DD/YYYY hh:mm:ss[1]
DOWN_TIME	Amount of time the line was halted in seconds	Integer in seconds
DELAY_CODE	Delay Code Number	Integer
MACHINE	Name of production line that caused this event.	Alphanumeric, up to 24 characters

Available Job Complete Fields

Field Name	*Description*	*Field Data Type*
TIMESTAMP	Date and time of action that caused this event.	MM-DD-YYYY hh:mm:ss[1]
TIMESTAMPSC	Same as TIMESTAMP field but with / delimeter on the date	MM/DD/YYYY hh:mm:ss[1]
JOB	Job Name	Alphanumeric, up to 16 characters
MACHINE	Name of production line that caused this event.	Alphanumeric, up to 24 characters

[1]Note: Date time format where:
MM = month of year, 01 - 12
DD = day of month, 01 - 31
YYYY = year
hh = hour, 00 - 23
mm = minute, 00 - 59
ss = seconds, 00 - 59

Export File Example

Export Header File Contents:

```
1,MACHINE,TIMESTAMP
2,MACHINE,TIMESTAMP,LENGTH,QUANTITY,JOB,PROFILE,MATERIAL,BATCH,PART,COIL,EMPLOYEE
3,MACHINE,TIMESTAMP,LENGTH,QUANTITY,JOB,PROFILE,MATERIAL,BATCH,PART,COIL,EMPLOYEE
4,MACHINE,TIMESTAMP,MATERIAL,NEW COIL,PREVIOUS COIL,DESTINATION
5,MACHINE,TIMESTAMP,SCRAP,COIL,EMPLOYEE
6,MACHINE,TIMESTAMP,LENGTH,QUANTITY,JOB,PROFILE,MATERIAL,BATCH,PART,COIL,EMPLOYEE
```

Export Data File Contents:

```
5,R-Panel,01/09/2003 15:13:02,31.125,112-W
1,R-Panel,01/09/2003 15:13:05
3,R-Panel,01/09/2003 15:47:25,96.000,1000,PO 12345,R-Panel,White 42-030,1,24,112-W
2,R-Panel,01/09/2003 16:10:22,48.000,357,PO 12345,R-Panel,White 42-030,1,0,112-W
6,R-Panel,01/09/2003 16:10:25,48.000,-1,PO 12345,R-Panel,White 42-030,1,0,112-W
1,R-Panel,01/09/2003 16:10:45
3,R-Panel,01/09/2003 16:10:25,48.000,644,PO 12345,R-Panel,White 42-030,1,0,112-W
3,R-Panel,01/09/2003 16:15:13,24.000,1000,PO 12345,R-Panel,White 42-030,1,0,112-W
3,R-Panel,01/09/2003 16:33:58,120.000,500,PO 12345,R-Panel,White 42-030,2,24,112-W
3,R-Panel,01/09/2003 16:46:14,36.000,250,PO 12345,R-Panel,White 42-030,2,0,112-W
3,R-Panel,01/09/2003 16:57:09,72.000,250,PO 12345,R-Panel,White 42-030,2,12C,112-W
2,R-Panel,01/09/2003 16:57:09,0.000,0,,,,,,
4,R-Panel,01/09/2003 17:05:48,Red Iron 16-014,113-R,112-W,INVENTORY
5,R-Panel,01/09/2003 17:08:02,26.000,112-R
1,R-Panel,01/09/2003 17:08:05
2,R-Panel,01/09/2003 17:25:25,24.000,100,PO 12347,R-Panel,Red Iron 16-014,1,0,113-R
```