Damage Code Data Spooler
User Documentation

Based on WIS/ASRA DVD

Valid from data spooler-version 2.2.20.X

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1. Damage-Code Data Spooler

1.1 Function of Damage-Code Data Spooler

The damage-code data spooler (SSL data spooler) enables damage code data for conventional interfaces to be spooled out of the WIS/ASRA DVDs. The SSL data spooler is contained on every 1st DVD of the respective scope of supply of WIS/ASRA.
For information regarding the installation and the operation of the SSL data spooler, please read the installation instructions of the data spooler and the "Operation Manual" of the installation of EWA.

You will find the documentation of the SSL data spooler on the WIS/ASRA DVD and in the download directory "Documentation for Administrators" in the EWA navigation bar.
In the manual for the configuration of the data spooler, you will find information on calling and configuring the data spooler which goes beyond that contained in this document.

2. Graphic Interface of Damage-Code Data Spooler

Before files can be created with the SSL data spooler, various settings must be made which affect the file creation. The following sections explain these options.

2.1 Program Start

The condition for operation of the SSL data spooler is, on the one hand, the installation of an EWA base system and at least the data for the WIS application. In addition, the data spooler must have been installed separately from the first WIS medium.
The SSL data spooler can only be operated on the server on which the EWA server was set up, as access to the database and the local licenses is required.

The following icon is used for the "SSL data spooler":
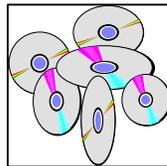
It will be displayed below "EWA" in the Start menu of Windows after installation.
The program can also be started directly from the installation directory:
[SPOOLER_INSTALLDIR]\startSSLSpooler.bat

2.1.1 Batch Mode

To start the spooler in the "batch mode", the following command line parameters are required:

Parameter	Description
-nongui	Start the spooler in the batch mode
-f <Folder>	Folder which contains all spooler configuration files for the batch mode.
-outDir	Base output directory for the batch mode.

These parameters are specified directly after the start file. A call for the batch mode is therefore as follows:
startSSLSpooler.bat –nongui –f c:\data\spoolerBatchConfig\ -outDir c:\ewa\spooler\ssl\

The following return values are defined for the batch call:

Returnvalue	Description
0	The batch call has been run through successfully.
1	At least one error has occurred when carrying out the batch call. The errors which occurred are marked accordingly in the log file as ERROR.

2.2   License Check of SSL Data Spooler

Before every program start, the SSL data spooler checks whether a valid WIS license (including damage code license) is available. If this condition is not met, the SSL data spooler is canceled with a fault message.

2.3   User Interface of SSL Data Spooler

After the SSL data spooler is started, the user interface appears (see Fig. 2.01).
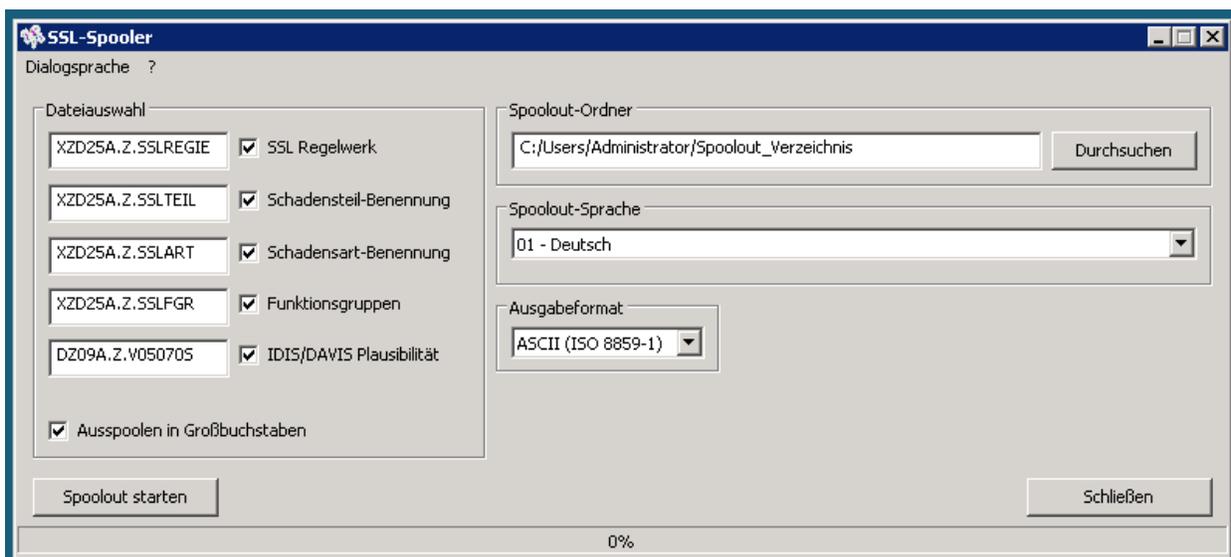
Fig. 2.01: User interface of SSL data spooler

2.3.1 Selection of the dialog language and output of the version

The dialog language can be set in the menu of the SSL data spooler. The respectively selected language is provided with a checkmark. When the program is exited, the selected dialog language is saved so that it is active again during the next program start. The selection of the dialog language is blocked during spooling. It is also possible to output the version number of the SSL data spooler. The item ?/Info must be selected for this purpose.

2.3.2 Selection of Spoolout Language

The language in which the files are to be spooled out is selected in the "Spoolout language" list field. The list field contains all SSL languages which the WIS DVD makes available (see Fig. 2.02).
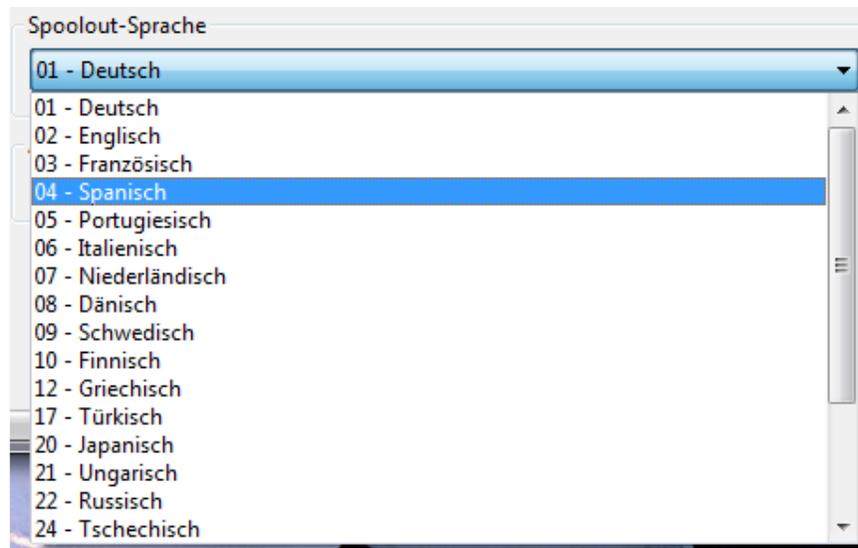
Fig. 2.02: "Spoolout language" list field

The language selection has no effect on the file which contains the SSL rules, as this file is created independent of a specific language.

2.3.3 Selection of Spoolout Files

The SSL data spooler provides five different file types, which are shown in the "File selection" field (see Fig. 2.03).

Fig.. 2.03: "File selection" field

By activating or deactivating the white checkboxes next to the file name, the corresponding files are selected or deselected (see Fig. 2.04).
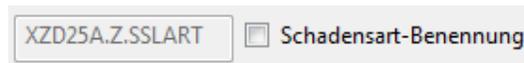
Fig. 2.04: "SSL rules" file is not to be spooled out.

The input fields highlighted in white or gray on the left next to the checkboxes contain the specified file name for the corresponding file. These names can be replaced with others (see Fig. 2.05).
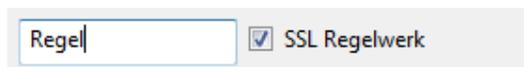
Fig. 2.05: Changed file name of "SSL rules" file

When the SSL data spooler is run, all SSL files are at first activated for spooling out. Then you can deactivate individual files again.
The default entries for the file names are specifically specified for the respective spoolout language in the "sslGeneral.properties" file in the configuration directory of the spooler. When the program is exited, the file names are not written back into the configuration file, i.e. when the program is restarted, the default entries from the configuration file are entered in the file name fields again.
The "Spool out in upper case letters" checkbox is located at the bottom in the "File selection" field (see Fig. 2.03). If this checkbox is activated, the SSL data spooler automatically converts all texts into upper case letters. However, if the checkbox is not active, all texts are spooled out of the database unchanged.

2.3.4 Output Format

The SSL data spooler supports three different output formats for the spoolout files, which can be selected in the "Output format" list field (see Fig. 2.07).
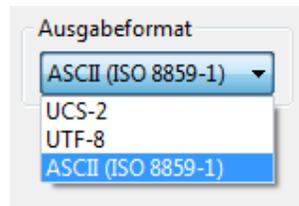
Fig. 2.07: "Output format" list field

For spoolout languages which cannot be shown in the ASCII character set (currently Greek, Turkish, Russian, Japanese, Bulgarian, Chinese and Korean), only two formats (UCS, UTF8) are offered here. Details on the various formats are provided in Chapter 4.

2.3.5 Specification of Spoolout Folder

The SSL data spooler saves all spoolout files and the Log file and temporary files in a directory. This directory can be specified in the "Spoolout folder" field (see Fig. 2.08).
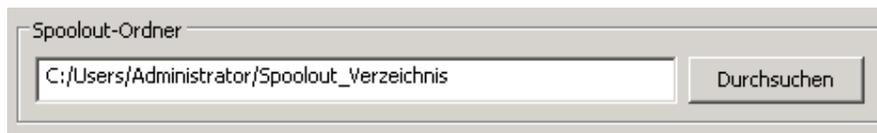
Fig. 2.08: "Spoolout folder" field

The spoolout directory can be specified in two different ways. On the one hand, the spoolout path name can be entered directly in the white input field with the keyboard and, on the other hand, it can be specified by clicking on the "Browse" button. A click on "Browse" opens a dialog box which enables a directory to be selected.

Note:
The directory is automatically filled in when the spooler is started for the first time. The default entry matches the path in which the EWA server will offer the spooled-out files of other users. Therefore, this path should only be changed in special cases.

3. Spoolout Process

After making all necessary settings, as described in the previous sections, the spoolout of the selected files can be carried out.

3.1 Starting Spoolout Process

Clicking on the "Start spoolout" button initiates the spoolout process.
Then the SSL data spooler checks various conditions which would prevent a successful run-through and outputs a warning or fault message in case of doubt.

Among other things, the SSL data spooler checks whether

- sufficient hard disk space is available on the specified hard disk,
  (= comparison between the estimated value set by Daimler and the actual disk space; starting is nevertheless possible if the user feels that the disk space would have to be sufficient)
- the spoolout directory can be created
- the specified files already exist in the spoolout directory.

If the SSL data spooler does not find any faults, then the spoolout process is started and the appearance of the user interface changes (see Fig. 2.13).
All input and list fields are replaced with a large white list field which displays progress and error messages. These messages are in English.
The progress display shows the overall progress of the spoolout process in %.
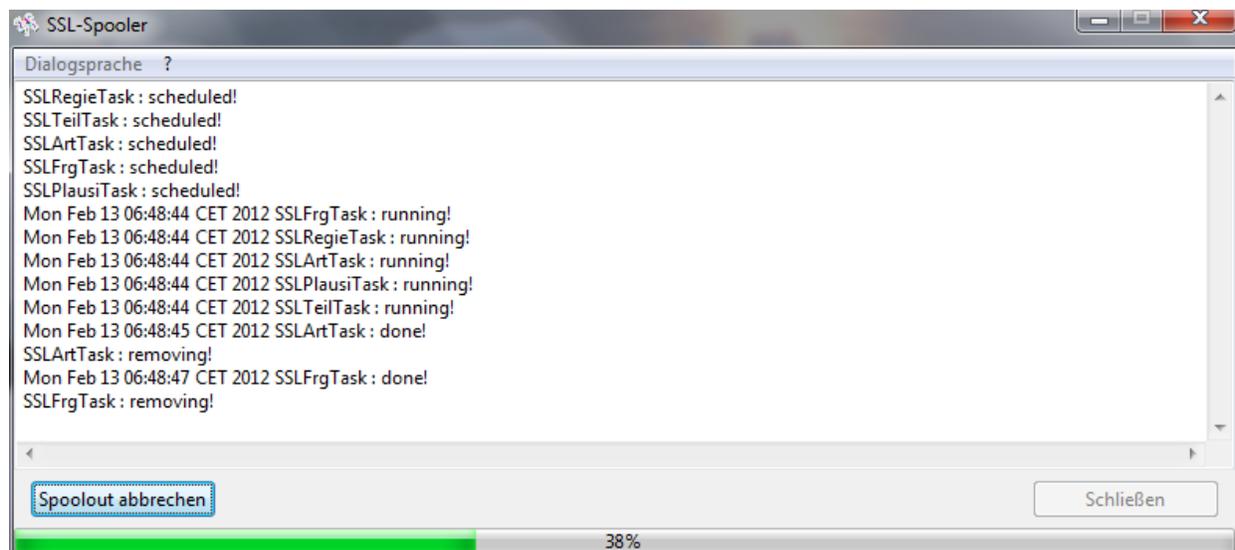
Fig. 2.13: User interface after starting spoolout process

3.2   Possible Error Messages of SSL Data Spooler

The SSL data spooler is designed so that it only cancels the spoolout process in especially critical cases. There are two different error messages:
An error message ("ERROR") is output if a condition occurs which prevents the further spoolout of the current file, e.g. that the
WIS DVD does not return any results for a certain request. If this message is output, the SSL data spooler cancels the creation of the current file to continue with the next file in its list.
A fatal error message ("FATAL") only occurs if the spoolout cannot be continued. Reasons for this are, for example, a fatal database error or a full hard disk. Following this message the SSL data spooler cancels the spoolout process.

3.3   Manual Cancellation of Spoolout Process

The user can end an ongoing spoolout prematurely by clicking on "Cancel spoolout".
Then the SSL data spooler ends the spoolout process.
After the SSL data spooler has canceled the spoolout process, it is sufficient to click on "OK" to return to the original user interface.

Note: The premature cancellation of an ongoing spoolout process may take several minutes under unfavorable conditions.

3.4   Successful Completion of Spoolout Process

If the SSL data spooler has ended the spoolout process without the manual intervention of the user, then it is sufficient to click on the "OK" button to return to the original entry screen of the SSL data spooler. Then a new spoolout process can be started here. Clicking on "Close" ends the SSL data spooler.

3.5   Log File

In addition to the spoolout files, the SSL data spooler also creates a text file which contains the course of the spoolout process including all error and warning messages.
The name of this log file for the SSL data spooler is "spoolOut{{Year}-{Month}-{Day}_{Hour}-{Minute}}.log", where the name in parenthesis contains the point in time (date, time) at which the spoolout was started. This enables a log file to be clearly assigned to a set of spoolout files. The log file generated during a spoolout (with standard configuration) is stored in the spoolout directory.

A tip for quality control:
- Log file (inspection for error messages, see 3.2)
- MB size (comparison with size of corresponding files of the previous version)
- Random samples of damaged parts, model designations, damage types (comparison of data on the DVD and in the spool file)
- Completeness (visual inspection for completeness of the spool files)

3.5.1   Structur of Log Entries

[<Spoolout File>] <Log Level> [<Data Record ID>] - [<Field Name>] <Log Message> <Message End Class> <Time Stamp>

Example:

[XZD25A.Z.SSLFGR] WARN [XXXXX-42.45-XX-XXXXXX] - [functionalGroupDesc] : [67] is longer than maximum allowed length[66] and is truncated
com.daimler.gsp.dataspooler.data.ssl.validation.SSLFixator 2012-05-16 09:34:32,112
[XZD25A.Z.SSLFGR] WARN [XXXXX-88.40-XX-XXXXXX] - [functionalGroupDesc] : [81] is longer than maximum allowed length[66] and is truncated
com.daimler.gsp.dataspooler.data.ssl.validation.SSLFixator 2012-05-16 09:34:32,179
[XZD25A.Z.SSLFGR] WARN [XXXXX-88.50-XX-XXXXXX] - [functionalGroupDesc] : [67] is longer than maximum allowed length[66] and is truncated
com.daimler.gsp.dataspooler.data.ssl.validation.SSLFixator 2012-05-16 09:34:32,179
[XZD25A.Z.SSLFGR] WARN [XXXXX-98.127-XX-XXXXXX] - [functionalGroup2] : [127] is greater than the maximum allowed value[99]
com.daimler.gsp.dataspooler.data.ssl.validation.SSLFixator 2012-05-16 09:34:32,188
[XZD25A.Z.SSLFGR] WARN [XXXXX-127.10-XX-XXXXXX] - [functionalGroup1] : [127] is greater than the maximum allowed value[99]
com.daimler.gsp.dataspooler.data.ssl.validation.SSLFixator 2012-05-16 09:34:32,189

3.5.2 Structure of Data Records ID

[<Damaged part>-<Design group>.<Function group>-<Damage type>-<Mode designation/Model series>]
The ID indicates the position of the data record in the spoolout file. If one of the values is not available, it is replaced with an "X".

Example:
[43626-XX.XX-99-XXXXXX]

3.5.3 Sorting Log File

As the various spool contents are spooled out in parallel, they are entered in this log file unsorted. However, the file can be sorted using a text editor (e.g. Notepad++ with "NppColumnSort" plugin) so that the log entries are listed by output file.

Proceed as follows to do this:
Download and install Notepad++ (http://notepad-plus-plus.org/)
Download plugin (NppColumnSort).
(http://william.famille-blum.org/blog/index.php?entry=entry110123-113226)
Save the "NppColumnSort.dll" file in the <NOTEPAD++_INSTALLDIR>\plugins folder.
Open the log file with Notepad++.
Sort the file in Notepad++. To do this, open the "Plugins" menu, select the item "Column Sorting" and run the "Sort" function.
The file should then be sorted correctly.

4.   Output Formats

The SSL data spooler supports the following different output formats:

4.1   ASCII (ISO 8859-1) Output Format

Each character is shown in the ASCII format by one byte. As a result, the ASCII character set enables a maximum of 255 different characters. The "ISO 8859-1" standard defines the characters assigned to these 255 different values.
As the SSL data spooler (depending on the WIS net version) currently supports over 20 different languages, it is not possible to show all these languages in the ASCII format, which of course only enables 255 permanently defined characters.
Therefore, the SSL data spooler has a list of character replacement rules which define what character(s) of a language is/are represented by which character(s) of the ASCII character set. However, with the SSL data spooler is it not possible, among other things, to generate Japanese, Greek or Turkish text in the ASCII format. This is due to the fact that these languages contain too many characters which cannot be read and displayed in the ASCII format.

4.2   Output Format UCS2

The UCS2 output format, also called Unicode, provides two bytes for each character. As a result, this format also offers sufficient space for showing complex languages like Japanese. The first two bytes of each spoolout file in the UCS2 format indicate whether the file is written in "Little Endian" or "Big Endian". The "0xFFFE" byte sequence indicates, for example, "Little Endian", which means that, for example, the character "A" is saved as "0x4100". The data spooler always creates the UCS2 files in this format.

Note: Most spoolout files contain a byte sequence in the header consisting of eight zero bytes (sixteen zero bytes in UCS2), which mark the start of the file. Some text editors misunderstand this byte sequence in UCS2 files as the end of the file and therefore do not display the file. To avoid this problem, this byte sequence must be deleted with a hex editor. Then said text editors can display the files again correctly.

4.3   UTF8 Output Foprmat

This output format shows characters with a variable number of bytes. Each ASCII character is represented by one byte, and all other characters by two or three bytes. For example, most Japanese characters are shown with three bytes.
The UTF8 format is very popular, as it shows most texts with less space than UCS2.

5.   Configuration File of Damage-Code (SSL) Data Spooler

There is an "sslSpooler.properties" configuration file for the SSL spooler. It is located in the installation directory of the spooler in the config/ subdirectory.

This file contains the same options as in the user interface of the spooler:

Parameter	Description
display.name	Name of the spooler. This is shown in the user interface as a window title.
gui.language	Language in which the user interface is displayed. Permissible values are: 00 for German 02 for English
output.dir	Directory into which the output files are to be written.
spoolout.language	Language in which the spoolout is to be carried out. Data are written in the output files in this language. Permissible values: Double-digit number with leading zero. All values located in the WIS database.
spoolout.format	File format in which the output files are to be written. Permissible values: UCS2 UTF8 ASCII
spoolout.uppercase	Indicates whether the data are to be output in upper case letters (only with ASCII). Permissible values: true Upper case letters false As in the database
spool.file.SSLRegel	Indicates whether the file "SSL Rules" is to be output. Permissible values: true File is created false File is not created
spool.file.SSLTeil	Indicates whether the file "Damaged part designation" is to be output. Permissible values: true File is created false File is not created
spool.file.SSLArt	Indicates whether the file "Damage type designation" is to be output. Permissible values: true File is created false File is not created
spool.file.SSLFGR	Indicates whether the file "Function group" is to be output. Permissible values: true File is created false File is not created
spool.file.SSLPlausi	Indicates whether the file "IDIS/DAVIS plausibility" is to be output. Permissible values: true File is created false File is not created
sslfile.name	Only relevant in the batch mode. Comma-separated list (without blanks) with the file name for the spoolout. File name 1: SSL rules, File name 2: Damaged part designation, File name 3: Damage type designation,

Parameter	Description
	File name 4: Function groups, File name 5: IDIS/DAVIS plausibility The sequence and quantity is relevant. All five file names must be specified. Example: awatfile.name=XZD25A.Z.SSLREGIE,XZD25A.Z.SSLTEIL, XZD25A.Z.SSLART,XZD25A.Z.SSLFGR,DZ09A.Z.V05070S

The spooler loads these options when the spooler is started and initializes the user interface with them. When the spooler is closed, changes to the settings are saved back to this file.

```
# ----------------------------------------------------------------------------
# Name: sslSpooler.properties
# Version 1.0, 11/16/2011
# SSL Data Spooler
# Description: Configuration file with options for the SSL data spooler. These
#              will be used to spool out the SSL files.
# ----------------------------------------------------------------------------

# Display name of the spooler (used as GUI title)
display.name=SSL spooler

# Display language of the frontend.
# Supported values are: '00' for German or '02' for English
gui.language=00

# Output directory for the spool files (must exist).
output.dir=c:/Program Files/EWA net/downloads/spooler/damagecode

# Data language to spool out.
gui.language=00

# File encoding to be used for the files to be written.
spoolout.format=ASCII

# Flag indicating if texts should be converted to uppercase during spoolout.
spoolout.uppercase=true

# Flag indicating if the SSL file SSRegel should be written.
```

6.   File Description

All files which the SSL data spooler can create are complete files. Supplemental files cannot be created. Each of the files has a header, and the headers of the files differ.
Section 6.1 provides an overview of all files and the default file names.
The sections 6.2 to 6.6 describe the headers and the data formats of the individual file types.

6.1   File Overview

The SSL data spooler creates the following files unless otherwise specified by the user:

XZD25A.Z.SSLREGIE
XZD25A.Z.SSLTEIL
XZD25A.Z.SSLART
XZD25A.Z.SSLFGR
DZ09A.Z.V05070S

6.2   "SSL Rules" File (XZD25A.Z.SSLREGIE)

The "SSLRegie" file has a record length of up to 170 characters. It consists of a header record and the data records.

6.2.1 Header of "SSLRegie" File

The header of the "SSLRegie" file has the following structure:

No	Field Content	from	to	Length	Format	Value range	Example
1	Low Value	1	8	8	Low Value		
2	D	9	9	1	To		"S"
3	Version	10	14	5	To	zero X"?????" Text which is too long is cut off	"2001B"
4	Date	15	22	8	YYYYMMDD		"20011102"
5	Number of lines incl. header record	23	28	7	N	> 0 && <= 9999999 Error case: 0	"234123"

Here Low Value refers to the hexadecimal value 0h, AN alphanumeric format and N numeric format.

6.2.2 Structure of Data Records

Each data record in the "SSLRegie" file has the following structure:

No	Field Content	from	to	Length	Format	Value range	Example
1	Model designation or Model series	1	6	6	N	zero X"??????" Numeric, >= 000000 && <= 999999 Error case: "??????" Can also be 3, 4 or 5-place, then filled up (on right) with blanks.	"950023"", „120 ", „1660 ", „16813 "
2	Filler	7	7	1			
3	Function group	8	12	5	To	zero X"??.??" DG + FG: Numeric, >= 0 && <= 99 Error case DG or FG: "??"	"15.01"
4	Filler	13	13	1			
5	Damaged part	14	18	5	To	zero X"?????" Text which is too long is cut off Text which is too short is filled up with blanks.	"15003"
6	Filler	19	19	1			
7	Assigned damage type (1)	20	21	2	To	zero X Do not output damage type Text which is too long is cut off	"04 or A1"
8	Filler	22	22	1	To		
9	Assigned damage type (2)	23	24	2	To	See Field 07	"04 or A1"
10	Filler	25	25	1	To		
...	....	...	...	...	...		...
65	Assigned damage type (50)	167	168	2	To	See Field 07	"04 or A1"
66	Filler	169	170	2	To		

Remark: If less than 50 assigned damage types exist, the line is not filled up to the end (170 characters), but is instead wrapped after the last damage type.

6.3 "Damaged Part Designation" File (XZD25A.Z.SSLTEIL)

The "SSLPART" file has a record length of 75 characters. Only the language versions selected in the SSL data spooler are contained in this file (e.g. 01-German, 02-English, 03-French, etc.). The file consists of a header record and the data records.

6.3.1 Header of "SSLPART" File

The header record of the "SSLPART" file consists of the following:

No	Field Content	from	to	Length	Format	Value range	Example
1	Low Value	1	8	8	Low Value		
2	ST	9	10	2	a		"ST"
3	Version	11	15	5	To	zero X'?????" Text which is too long is cut off	"2001B"
4	Date	16	23	8	YYYYMMDD		"20011102"
5	Number of lines incl. header record	24	29	6	N	> 0 && <= 9999999 Error case: 0	"234123"

6.3.2 Structure of Data Records

Each data record in the "SSLPart" file has the following structure:

No	Field Content	from	to	Length	Format	Value range	Example
1	Language ID	1	2	2	N	zero X'??" Numeric, >= 0 && <= 99 Error value: "??"	01, 02 etc.
2	Filler	3	3	1	N		
3	Damaged part	4	8	5	To	zero X'?????" Text which is too long is cut off Text which is too short is filled up with blanks.	"82001"
4	Filler	9	9	1	N		
5	Damaged part designation	10	75	66	To	zero X"" Text which is too long is cut off	"Operating unit command"

6.4   "Damage Type Designation" File (XZD25A.Z.SSLTYPE)

The "SSLTYPE" file has a record length of 70 characters. Only the language versions selected in the SSL data spooler are contained in this file (e.g. 01-German, 02-English, 03-French, etc.). The file consists of a header record and the data records.

6.4.1   Header of "SSLTYPE" File

The header record of the "SSLTYPE" file is structured as follows:

No	Field Content	from	to	Length	Format	Value range	Example
1	Low Value	1	8	8	Low Value		
2	SA	9	10	2	a		"SA"
3	Version	11	15	5	To	zero X"?????" Text which is too long is cut off	"2001B"
4	Date	16	23	8	YYYYMMDD		"20011102"
5	Number of lines incl. header record	24	29	6	N	> 0 && <= 9999999 Error case: 0	"234123"

6.4.2   Structure of Data Records

Each data record in the "SSLTYPE" file has the following structure:

No	Field Content	from	to	Length	Format	Value range	Example
1	Language ID	1	2	2	N	zero X"??" Numeric, >= 0 && <= 99 Error value: "??"	01
2	Filler	3	3	1			
3	Identifier as to whether paint or mechanical damage type	4	4	1	To	zero X" " Only "L" or "M". Error value: "?"	"L", "M" or " ".
4	Filler	5	5	1			
5	Damage type	6	7	2	To	zero X"??" Text which is too long is cut off	"04"
6	Filler	8	8	1			
7	Designation	9	70	62	To	zero X"" Text which is too long is cut off	"leaky"

6.5 "Function Groups" File (XZD25A.Z.SSLFGR)

The "SSLFRG" file has a record length of 75 characters. Only the language versions selected in the SSL data spooler are contained in this file (e.g. 01-German, 02-English, 03-French, etc.). The file consists of a header record and the data records.

6.5.1 Header of "SSLFGR" File

The header record of the "SSLTYPE" file is structured as follows:

No	Field Content	from	to	Length	Format	Value range	Example
1	Low Value	1	8	8	Low Value		
2	SF	9	10	2	a		"SF"
3	Version	11	15	5	To	zero X"?????" Text which is too long is cut off	"2001B"
4	Date	16	23	8	YYYYMMDD		"20011102"
5	Number of lines incl. header record	24	29	6	N	> 0 && <= 9999999 Error case: 0	"234123"

6.5.2 Structure of Data Records

Each data record in the "SSLFGR" file has the following structure:

No	Field Content	from	to	Length	Format	Value range	Example
1	Language ID	1	2	2	N	zero 2"??" Numeric, >= 0 && <= 99 Error value: "??"	01
2	Filler	3	3	1			
3	Function group	4	8	5	To	zero 2"??.??" DG + FG: Numeric, >= 0 && <= 99 Error case DG or FG: "??"	"01.19"
4	Filler	9	9	1			
5	Function group designation	10	75	66	To	zero 2"" Text which is too long is cut off	

6.6 "IDIS/DAVIS Plausibility Data" file (DZ09A.Z.V05070S)

This file has a fixed record length of 92 characters. Only the language versions selected in the SSL data spooler are contained in this file (e.g. 01-German, 02-English, 03-French, etc.). The file consists of a header record and the data records.

Note: All lines in the file begin with a blank.

6.6.1 Header of File

The header record of the file is structured as follows:

No	Field Content	from	to	Length	Format	Value range	Example
1	Default text	1	15	15	To		0000000 STATUS:
2	Version of SSL	16	92	77	To	zero 2"?????" Text which is too long is cut off	"2001B"

6.6.2 Structure of Data Records

The header record of the file is structured as follows:

No	Field Content	from	to	Length	Format	Value range	Example
1	Blank	1	1	1	a		
2	Damaged part	2	6	5	To	zero X"?????" Text which is too long is cut off Text which is too short is filled up with blanks.	00001
3	Damage type	7	8	2	To	zero X"??" Text which is too long is cut off	01
4	Placeholders (stars)	9	13	5	To		*****
5	Repair type	14	20	7	N	(List of repair types) Text which is too long is cut off	126789
6	Blank	21	21	1	a		
7	ID for discontinued combination	22	22	1	a		H
8	Product assignment	23	23	1	a	zero X" " Text which is too long is cut off	
9	Blank	24	25	2	a		
10	Damaged part designation; separating character ":"; blank; damage type designation	26	92	67	a	If damaged part or damaged part designation = zero: "" Text which is too long is cut off Damaged part designation has max. length 53. Text which is too long is cut off Because of the separating characters: „:";Blank the remaining maximal length is 65.	Engine: leaky

Contact:

This guideline was created by:

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