

# ASRA Data Spooler

## User Documentation

Based on WIS/ASRA DVD

and book/ column mapping

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# INHALT

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## **1. ASRA Data Spooler**

### **1.1 Function of ASRA Data Spooler**

The ASRA data spooler enables data for conventional interfaces to be spooled out of the WIS/ASRA DVD. The ASRA data spooler is contained on every DVD of the respective scope of supply of WIS/ASRA.

For information regarding the installation and the operation of the ASRA 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 ASRA 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. Using the graphic user interface of the ASRA data spooler**

Before files can be created with the ASRA 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 ASRA data spooler is, on the one hand, the installation of an EWA base system and at least the data for the WIS/ASRA application. In addition, the data spooler must have been installed separately from the first WIS/ASRA medium.

The ASRA 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 icon for starting is entered following the installation on the server in the Start menu of Windows below "EWA".

The program can also be started directly from the installation directory:  
[SPOOLER\_INSTALLDIR]\startASRASpooler.bat

#### **2.1.1 Batch Mode**

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

Parameter	Description
-nogui	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:

```
startASRASpooler.bat -nongui -f c:\data\spoolerBatchConfig\ -outDir c:\ewa\spooler\asra\
```

The following return values are defined for the batch call:

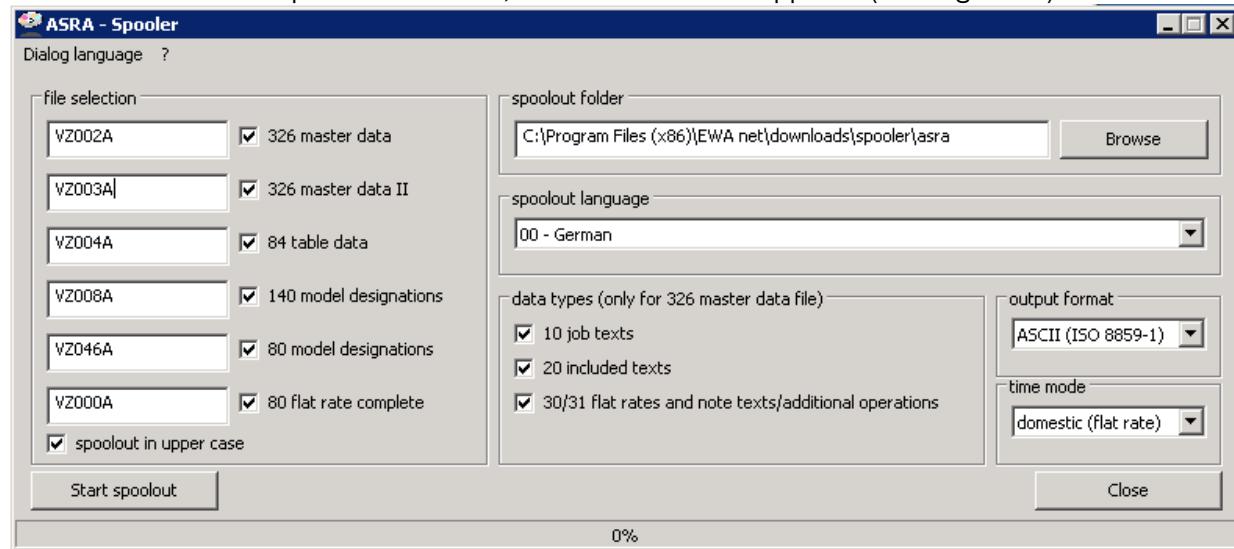
ReturnValue	Description
0	The batch call has been run through successfully.
1	At least one error has occurred when carrying out the batch call. The errors which occurred are marked accordingly in the log file as ERROR.

## 2.2 License Check of ASRA Data Spooler

Before every program start, the ASRA data spooler checks whether a valid WIS/ASRA license is available. If this condition is not met, the ASRA data spooler is canceled with a fault message.

## 2.3 User Interface of ASRA Data Spooler

After the ASRA data spooler is started, the user interface appears (see Fig. 2.01).



### 2.3.1 Selection of the dialog language and output of the version

The dialog language can be set in the menu of the ASRA 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 ASRA 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 languages which the WIS/ASRA DVD makes available for ASRA (see Fig. 2.02).

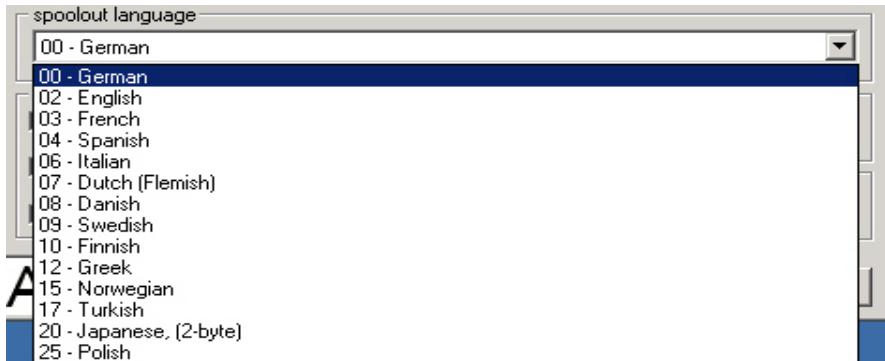


Fig. 2.02: "Spoolout language" list field

The language selection has no effect on the 80/140 model designation type tables files, as these files are created independent of the language.

### 2.3.3 Selection of Spoolout Files

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

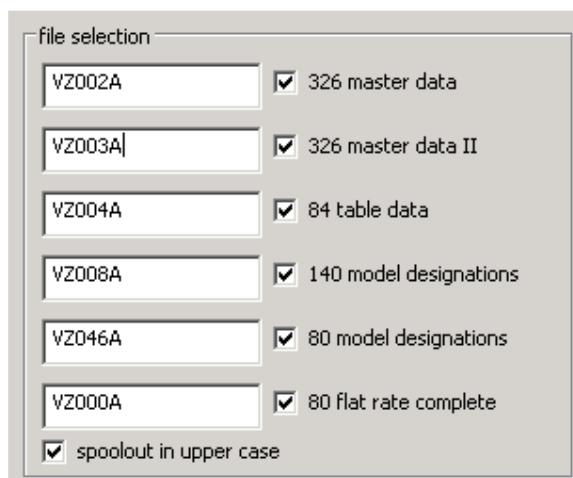


Fig. 2.03: "File selection" field

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: "140 model designation" 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. However, these names can also be replaced with others (see Fig. 2.05).



Fig. 2.05: Changed file name of "84 table data" file

**Note:** The specified file names in the input fields are dependent on the selected spoolout language. For example, the 326 master data file for French is called "VZ122A", however for Danish "VZ322A".

If the "326 master data" file is selected, the record types which are to contain the file can be selected (with checkboxes) in the field "Record type (only for 326 master data)". The record types "Operation texts", "Included work texts" and "Work units" and the notes/additional operations are available to choose from (see Fig. 2.06). At least one record type must be selected if the "326 master data" file is selected.

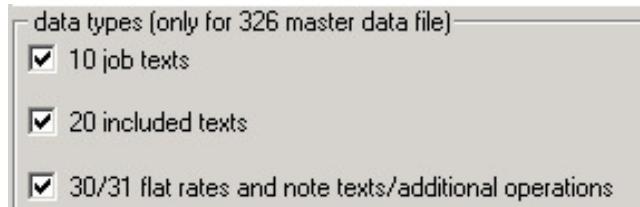


Fig. 2.06: "Record type (only for 326 master data)" field

The checkbox "Spool out in upper case letters" (see Fig. 2.03), which can only be selected for the "ASCII" output format, is located below in the "File selection" field. If this checkbox is activated, the ASRA 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 ASRA 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).

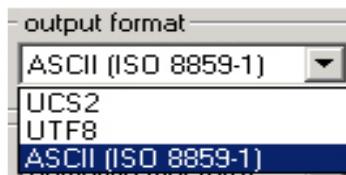


Fig. 2.07: "Output format" list field

For spoolout languages which cannot be shown in the ASCII character set (currently Greek, Turkish, Russian, Japanese, Bulgarian, Chinese, Slovak 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 ASRA 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 (see Fig. 2.09).

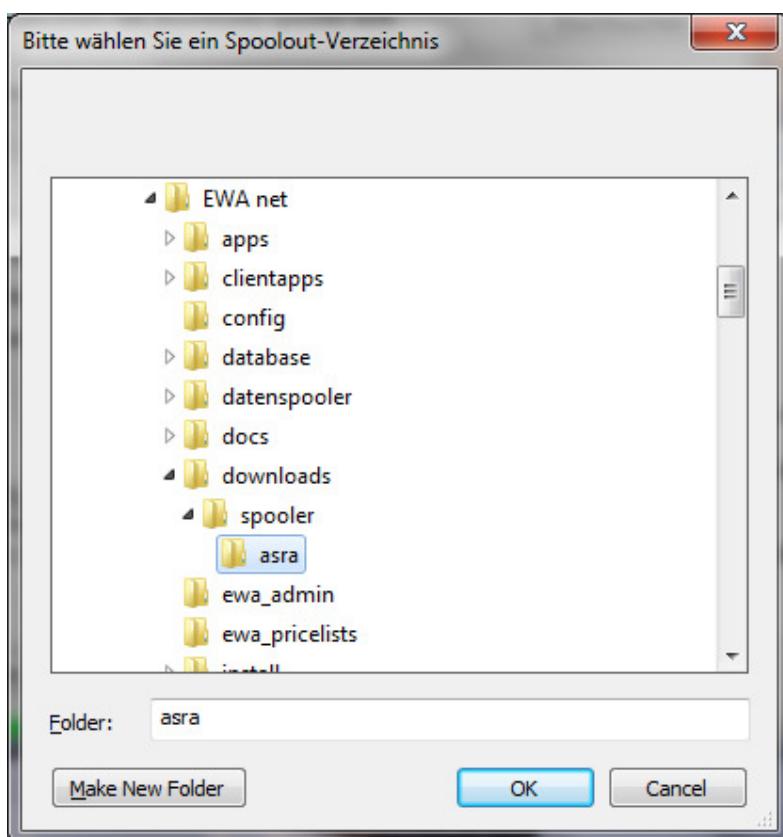


Fig. 2.09: Folder dialog box

**Note:**

The spooler automatically suggests a path during the program start – this should be applied so that users of the EPC/WIS/ASRA system can access spooled-out files via the web interface.

### 2.3.6 Selecting Correct Time Mode

The ASRA data spooler distinguishes between two regions ("Domestic" and "Export"), which are assigned their own time data creation.

"Domestic" region = "WU" (= work unit),

"Export" region = "Hour" (= decimal hour)

For all spoolout languages except German, files can only be created in the "Hour" time mode.

If the spoolout language "German" is selected, the correct time mode must be selected in the "Time mode" list field (see Fig. 2.10)



Fig. 2.10: "Time mode" list field with spoolout language "German"

**Note:** Incorrect setting of the time mode results in falsified times which cannot be detected by the user!

### 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 (see Fig. 2.12).

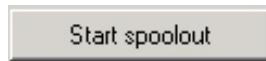


Fig 2.12: "Start spoolout" button"

Then the ASRA 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 ASRA 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 ASRA 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, warning and error messages. These messages are in English. The progress display shows the overall progress of the spoolout process in %.

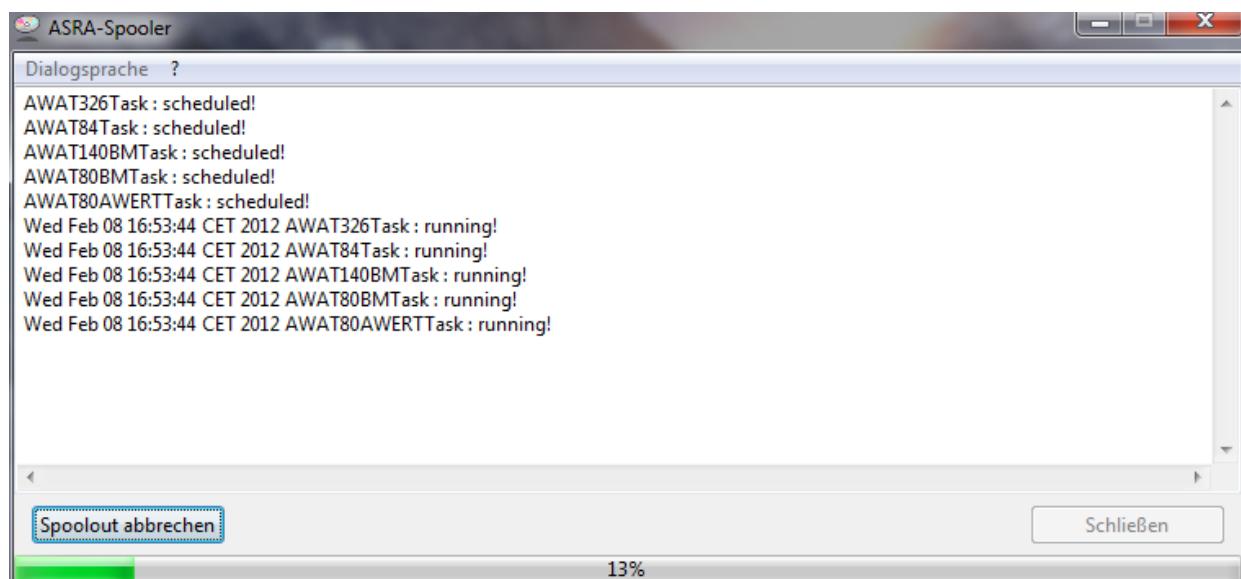


Fig. 2.13: User interface after starting spoolout process

### 3.2 Possible error messages of the ASRA data spooler

The ASRA data spooler is designed so that it only cancels the spoolout process in especially critical cases. There are three different error messages:

A warning message ("WARNING") indicates "irregularities" during the spoolout, e.g. texts on the DVD, which are too long to be written completely to the spoolout file. Of this type of message it output, then the spoolout is continued unimpaired; then the texts are not shown completely in the spoolout file. Remedy: Have the data corrected. An error message ("ERROR") is output if a condition occurs which prevents the further spoolout of the current file, e.g. that the WIS/ASRA DVD does not return any results for a certain request. If this message is output, the ASRA 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 ASRA 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" (see Fig. 2.14).



Fig. 2.14: "Cancel spoolout" button

Then the ASRA data spooler ends the spoolout process (see Fig. 2.15).

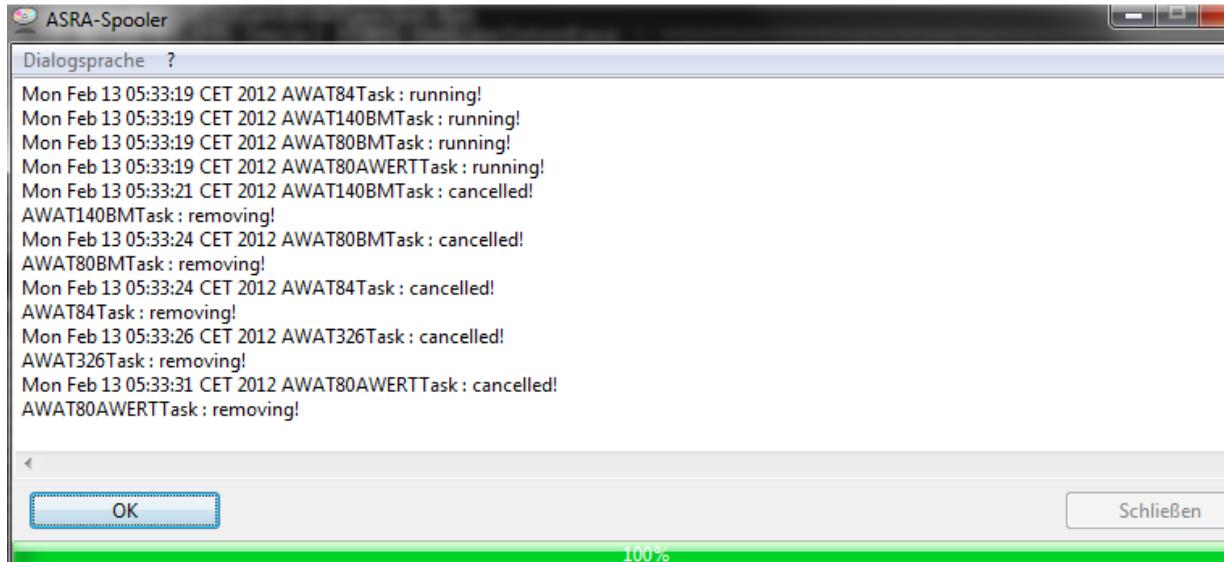


Fig. 2.15: Wait for end of process

After the ASRA data spooler has canceled the spoolout process, it is sufficient to click on "OK" to return to the original user interface (see Fig. 2.16).

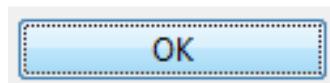


Fig. 2.16: „OK“ button

**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 ASRA data spooler has ended the spoolout process without the manual intervention of the user, then it is sufficient to click on the "OK" button (see Fig. 2.17) to return to the original entry screen of the ASRA data spooler. Then a new spoolout process can be started here. Clicking on "Close" ends the ASRA data spooler (see Fig. 2.17).



Fig. 2.17: „Close“ button

### 3.5 Log File

In addition to the spoolout files, the ASRA 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 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:

1. Log file (inspection for error messages, see 3.2)
2. MB size (comparison with size of corresponding files of the previous version)
3. Random samples of time (compare times on the DVD and in the spool file)
4. Completeness up to 98-.... (visual inspection for completeness of the spool files; are all families/all DGs/etc. present?)

### **3.5.1 Structure of Log Entries**

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

The <Data Record ID> and the <Field Name> can be empty if a content error or warning is not concerned, but rather a technical error.

Example:

```
[80GAWR] WARN [RecordType_10-00-98-XX-8827-X] - [jobText] : should be of length 6 lines
* 30 characters - Text and word in text too long. Truncating word and text.
com.daimler.gsp.dataspooler.tasks.asra.AWAT80AWERTTask 2012-06-21 14:25:31,144
[80GAWR] WARN [RecordType_10-10-98-XX-8836-X] - [jobText] : should be of length 6 lines
* 30 characters - Text and word in text too long. Truncating word and text.
com.daimler.gsp.dataspooler.tasks.asra.AWAT80AWERTTask 2012-06-21 14:25:31,146
[80GAWR] WARN [RecordType_10-10-98-XX-8866-X] - [jobText] : should be of length 6 lines
* 30 characters - Text and word in text too long. Truncating word and text.
com.daimler.gsp.dataspooler.tasks.asra.AWAT80AWERTTask 2012-06-21 14:25:31,148
[80GAWR] WARN [RecordType_10-10-98-XX-8973-X] - [jobText] : should be of length 6 lines
* 30 characters - Text and word in text too long. Truncating word and text.
com.daimler.gsp.dataspooler.tasks.asra.AWAT80AWERTTask 2012-06-21 14:25:31,154
[80GAWR] WARN [RecordType_10-10-98-XX-8980-X] - [jobText] : should be of length 6 lines
* 30 characters - Text and word in text too long. Truncating word and text.
com.daimler.gsp.dataspooler.tasks.asra.AWAT80AWERTTask 2012-06-21 14:25:31,155
```

### **3.5.2 Structure of Data Record ID**

<Record Type>-<Category>-<Design Group>-<Family>-<Operation Number>-<Category of Work Package>

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". The individual fields are separated from each other with "-".

Example:

Fax. 10 (-00) -91 -02 -8106

### **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).  
[\(http://william.famille-blum.org/blog/index.php?entry=entry110123-1132266\)](http://william.famille-blum.org/blog/index.php?entry=entry110123-1132266)  
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 ASRA data spooler supports three different output formats. The preferences of these output formats are explained in detail in the following.

### 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 ASRA data spooler (depending on the WIS/ASRA 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 ASRA 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 ASRA data spooler is it not possible, among other things, to generate Japanese, Greek, Russian or Korean 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 byte sequence "0xFFFF" means that the file is written in "Little Endian", where 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 two zero bytes (four 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 Format

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 ASRA Data Spooler

There is an "asraSpooler.properties" configuration file for the ASRA 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
spoolout.timemode	Specification of the time mode which is to be used for the spoolout (only with the language German – in all other languages only "foreign" is permissible) Permissible values: foreign    decimal hours (Export) domestic    work units (domestic)
spool.file.326.master data	Indicates whether the file "326 master data" is to be output. Permissible values: true            File is created false            File is not created
spool.file.326SD2.master data	Indicates whether the file "326 master data II" is to be output. Permissible values: true            File is created false            File is not created
spool.file.84.table data	Indicates whether the file "84 table data" is to be output. Permissible values: true            File is created false            File is not created
spool.file.140.model designation	Indicates whether the file "140 model designation" is to be output. Permissible values: true            File is created false            File is not created

spool.file.80.model designation	Indicates whether the file "80 model designation" is to be output. Permissible values: true File is created false File is not created
spool.file.80.AWert	Indicates whether the file "80 AWert" is to be output. Permissible values: true File is created false File is not created
file326.datatype10.operation texts	Indicates whether the record type "10 operation texts" is to be output in the file "326 master data". Permissible values: true File is created false File is not created
file326.datatype20.included work texts	Indicates whether the record type "20 included work texts" is to be output in the file "326 master data". Permissible values: true File is created false File is not created
file326.datatype30.work units	Indicates whether the record type "30 work units" is to be output in the file "326 master data". Permissible values: true File is created false File is not created
file326.datatype31.noteaddition	Indicates whether the record type "31 notes/additional operations" is to be output in the file "326 master data". Permissible values: true File is created false File is not created  Note: Data of the record type 31 can currently not be output separately. They are therefore automatically output together with the parameter file326.datatype30.work units.
awatfile.name	Only relevant in the batch mode. Comma-separated list (without blanks) with the file name for the spoolout. File name 1: 326 Master data, File name 2: 326 Master data II, File name 3: 84 Table data, File name 4: 140 Model designation, File name 5: 80 Model designation, File name 6: 80 Total AWERT The sequence and quantity is relevant. All five file names must be specified. Example: awatfile.name=VZ002A,VZ003A,VZ004A,VZ008A,VZ046A, VZ000A

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. The parameter name and value are separated from each other by an equals sign. Lines which start with "#" are comment lines.

Here is an example file:

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

# Display name of the spooler (used as GUI title)
display.name=ASRA 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/asra

# 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

# type of the time value to spool out (AW=domestic or decimal hours=foreign)
# Supported values are: 'domestic' or 'foreign'
spoolout.timemode=domestic

# Flag indicating if the AWAT file 326 should be written.
# Supported values are: 'true' or 'false'
spool.file.326.master.data=true

# Flag indicating if the AWAT file 326 SD 2 should be written.
# Supported values are: 'true' or 'false'
spool.file.326SD2.master.data=true

# Flag indicating if the AWAT file 84 should be written.
# Supported values are: 'true' or 'false'
spool.file.84.table.data=true

# Flag indicating if the AWAT file 140 should be written.
# Supported values are: 'true' or 'false'
spool.file.140.model.designation=true

# Flag indicating if the AWAT file 80 should be written.
# Supported values are: 'true' or 'false'
spool.file.80.model.designation=true

# Flag indicating if the AWAT file 80 AWert should be written.
# Supported values are: 'true' or 'false'
spool.file.80.AWert=true

# Flag indicating if operation texts of AWAT file 326 should be written.
# Supported values are: 'true' or 'false'
file326.datatype10.operation.texts=true

# Flag indicating if included work texts of AWAT file 326 should be written.
# Supported values are: 'true' or 'false'
file326.datatype20.included.work=true

# Flag indicating if work units of AWAT file 326 should be written.
# Supported values are: 'true' or 'false'
file326.datatype30.work.units=true

# Flag indicating if note and additional operations of AWAT file 326 should be written.
# Supported values are: 'true' or 'false'
file326.datatype31.note.addition=true
```

## **6. File Description**

All files which the ASRA data spooler can create are complete files. Supplemental files (delta files) cannot be created. Each of the files (with the exception of the “AWERT 80” file) has a header and a footer. The footers of all files are structured the same, however the headers of the files differ. In addition, the headers can also differ within a file type, depending on whether the file is a domestic or an export file. However, the headers of all export files are in turn the same. Section 6.1 provides an overview of all files and the standard file names assigned to them for each language. The sections 6.3 to 6.8 describe the headers and footers and the data formats of the individual file types.

### **6.1 Alphanumeric Families**

Due to the vehicle diversity, alphanumeric family groups must be used beginning in 2014. The AWAT data structures remain unchanged by this expansion. However, in addition to the numeric family groups, alphanumeric family groups can also occur in the future. This also affects the book/column conversion. This will be expanded for the new family groups (family codes). Details on this topic are documented in Chapter 6.10. In the following file record descriptions, the changes are highlighted with a **colored cell background**

### **6.2 File Overview**

Table 6.1 shows an overview of all files and their default names in the various languages.

<b>Language</b>	<b>Language Code in ASRA</b>	<b>Master Data RL 326</b>	<b>Master Data II RL 326</b>	<b>Table Data RL 84</b>	<b>Model Desig. File RL 140</b>	<b>Model Desig. File RL 80</b>	<b>Total Awert RL 80</b>
German Domestic	<b>00</b>	VZ002A	VZ003A	VZ004A	VZ008A	VZ046A	VZ000A
German Export	<b>00</b>	VZ042A	VZ043A	VZ044A	VZ008A	VZ046A	VZ040A
English	<b>02</b>	VZ082A	VZ083A	VZ084A	VZ008A	VZ086A	VZ080A
French	<b>03</b>	VZ122A	VZ123A	VZ124A	VZ008A	VZ126A	VZ120A
Spanish	<b>04</b>	VZ162A	VZ163A	VZ164A	VZ008A	VZ166A	VZ160A
Portuguese	<b>05</b>	VZ402A	VZ403A	VZ404A	VZ008A	VZ406A	VZ400A
Italian	<b>06</b>	VZ202A	VZ203A	VZ204A	VZ008A	VZ206A	VZ200A
Dutch	<b>07</b>	VZ482A	VZ483A	VZ484A	VZ008A	VZ486A	VZ480A
Danish	<b>08</b>	VZ322A	VZ323A	VZ324A	VZ008A	VZ326A	VZ320A
Swedish	<b>09</b>	VZ282A	VZ283A	VZ284A	VZ008A	VZ286A	VZ280A
Finnish	<b>10</b>	VZ362A	VZ363A	VZ364A	VZ008A	VZ366A	VZ360A
Greek	<b>12</b>	326GRI	326IIG	084GRI	VZ008A	VZ046A	80GAWG
Norwegian	<b>15</b>	VZ242A	VZ243A	VZ244A	VZ008A	VZ246A	VZ240A
Turkish	<b>17</b>	VZ442A	VZ443A	VZ444A	VZ008A	VZ446A	VZ440A
Japanese	<b>20</b>	VZ522A	VZ523A	VZ524A	VZ008A	VZ526A	VZ520A
Hungarian	<b>21</b>	326HUN	326IIH	084HUN	VZ008A	VZ046A	80GHUN
Russian	<b>22</b>	326RUS	326IIR	084RUS	VZ008A	VZ046A	80GAWR
Czech	<b>24</b>	326CZE	326IIC	084CZE	VZ008A	VZ046A	80GAWC
Polish	<b>25</b>	326POL	326IIP	084POL	VZ008A	VZ046A	80GAWP
Bulgarian	<b>27</b>	326BUL	326IIB	084BUL	VZ008A	VZ046A	80GBUL
Chinese	<b>28</b>	326CHI	326IIZ	084CHI	VZ008A	VZ046A	80GCCHI
Romanian	<b>29</b>	326ROM	326IIR	084ROM	VZ008A	VZ046A	80GROM
Slovenian	<b>81</b>	326SLO	326IIS	084SLO	VZ008A	VZ046A	80GAWS
Croatian	<b>82</b>	326KRO	326IIO	084KRO	VZ008A	VZ046A	80GAWK
Korean	<b>86</b>	326KOR	326IIK	084KOR	VZ008A	VZ046A	80GKOR
Slovak	<b>90</b>	326SLK	326IIV	084SLK	VZ008A	VZ046A	80GSLK

Table 6.1: File Overview for ASRA data spooler

### 6.3 „Master Data 326“ File

Each line of the "Master data 326" file consists of 326 characters.  
The "Master data 326" file is divided into 4 record types, i.e.

- Record type 10 (operation texts)
- Record type 20 (included work texts)
- Record type 30 (work units)
- Record type 31 (notes/additional operations)

The "Master data 326" file is organized according to the category, family and model code (= fields 02, 09 and 10 in the file description of the 140 model designation file). The correct time values are determined via the family and the model code.

### 6.3.1 The header of the „Master Data 326“ File for the “Domestic” region

Field No.	Field Designation	Length	Pos	Explanations
01	Record ID	2	01	Hex 00 00
02	Filler	2	03	Blank
03	Implementation date	8	05	YYYYMMDD, in ASRA with Field 08 (change service New) identical
04	Filler	2	13	Blank
05	ID Immediate change service Old	1	15	S or blank When passing on data, this field always contains a blank; for the immediate change service, an S is shown here
06	Change service Old	8	16	YYYYMMDD, in complete file identical to Field 08; in supplementary file: Date of version with which comparison is carried out for creation of the supplement
07	Filler	2	24	Blank
08	Change service New	8	26	YYYYMMDD, date of the current version
09	Filler	293	34	Blank

Table 6.2: Domestic header of "Master data 326" file

In the complete file, Field 03, Field 06 and Field 08 are the same; they contain the date and the current version. In the supplemental file, Field 03 and Field 08 contain the date of the current version and Field 06 the data of the version used for the comparison with the supplement creation.

### 6.3.2 Header of the „Master Data 326“ File for the “Export” region

Field No.	Field Designation	Length	Pos.	Explanations
01	Record ID	2	01	Hex 00 00
02	Date of current Version	8	03	YYYYMMDD
03	Language ID	2	11	Numeric, 00 to 99
04	Filler	1	13	Blank
05	Version month/year	5	14	MM/YY
06	Filler	308	19	Blank

Table 6.3: Export header of "Master data 326" file

### 6.3.3 Footer of the „Master Data 326“ File

Field No.	Field Designation	Length	Pos	Explanations
01	Record ID	2	01	Hex 9F 9F
02	Record counter	8	03	Number of records (without starting/end records) as 15-digit number plus a final "F", leading zeros at front, Comp-3/EBCDIC coded
03	Filler	316	11	Blank

Table 6.4: Export footer of “Master data 326” file

The final record has the same structure in all files. Only the length of the filler at the end differs.

The first 10 characters of the footer are packed in the EBCDIC/Comp-3 format (special COBOL coding). 20 characters consisting of "FFFF" + 15-digit number of the written records + "F" hexadecimal are interpreted for this purpose, in groups of 2 bytes mapped on the EBCDIC character set and compressed with it to 10 characters.

The number of records is followed by a filler. The filler begins at position 10 and continues up to the record length of the file concerned.

### 6.3.4 Structure of Record Type 10 (Operation Texts) of the „Master Data 326“ File

Field No.	Field Designation	Length	Format	Pos	Explanations	Default Value	Value Ranges	Sorting
01	Record ID	2	x	01	10= Operation text	10		
02	PC/CV ID	2	x	03	00= PC, 10= CV		zero → "??" Numeric value >= 0 && <= 99 Error value: "???"	1
03	—	2	x	05	Blank	Blank		
04	Design group	2	x	07	Numeric, 00 to 99		zero → "??" Numeric value >= 0 && <= 99 Error value: "???"	2
05	Reserve	1	x	09	Constant 0	0		
06	Operation number	4	x	10	Numeric, 0001 to 9999		zero → "????" Numeric value >= 0 && <= 9999 Error value: "????"	3
07	Reserve	1	x	14	Constant 0	0		
08	Management type	1	x	15	1= New, 2=Change, 3= Deletion			
09	Category	1	x	16	G= Stand-alone operation, blank = Linked operation or additional operation		zero → " "	
10	Operation text	180	x	17	6 lines of 30 places each (at least 1 line no the same)  Blank		Combined test must not be empty  Minimum of 3 characters (search term 1 character + blank + activity 1 character), maximum of 180 characters  Search term + activity must not be empty or zero.  Error value: "?"  Text which is too long will be cut off at the end.	
11	Invoice text <b>(will not be written)</b>	90	x	197	3 lines of 30 places each blanks or not equal to blanks	Blank		
12	Filler	40	x	287	Blank	Blank		

Table 6.5: Structure of record type 10 (operation texts) of “Master data 326” file

### 6.3.5 Structure of Record Type 20 (Included Work Texts) of the „Master Data 326“ File

Field No.	Field Designation	Length	Format	Pos	Explanations	Default Value	Value Ranges	Sorting
01	Record ID	2	x	01	20= Included work text	20		
02	PC/CV ID	2	x	03	00= PC, 10= CV		zero → "??" Numeric value >= 0 && <= 99 Error value: "??"	1
03	Family group	2	x	05	Alphanumeric, 00 to ZZ		zero → "??" Alphanumeric value >= 00 && <= ZZ Error value: "??"	2
04	Design group	2	x	07	Numeric, 00 to 99		zero → "??" Numeric value >= 0 && <= 99 Error value: "???"	3
05	Reserve	1	x	09	Constant 0	0		
06	Operation number	4	x	10	Numeric, 0001 to 9999		zero → "????" Numeric value >= 0 && <= 9999 Error value: "????"	4
07	Reserve	1	x	14	Constant 0	0		
08	Management type	1	x	15	1= New, 2=Change, 3= Deletion	1		
09	Text sequence ID	2	x	16	Numeric, 01 to 24.99  99= No following record; 01= first text following record, 02= second, etc.	99	Text which is too long (25 x 4 lines, i.e. > 100 lines) will be cut off at the end.	
10	Text area	280	x	18	4 text lines of 70 places each		zero → „(empty text)	
11	Filler	29	x	298	Blank	Blank		

Table 6.6: Structure of record type 20 (included work texts) of “Master data 326” file

### 6.3.6 Structure of Record Type 30 (Work Units) of the „Master Data 326“ File

Field No	Field Designation	Length	Format	Pos	Explanations	Default Value	Value Ranges	Sorting
01	Record ID	2	x	01	30= Work units	30		
02	PC/CV ID	2	x	03	00= PC, 10= CV		zero → "??" Numeric value >= 0 && <= 99 Error value: "??"	1
03	Family group	2	x	05	Alphanumeric, 00 to ZZ		zero → "??" Alphanumeric value >= 0 && <= ZZ Error value: "??"	4
04	Design group	2	x	07	Numeric, 00 to 99		zero → "??" Numeric value >= 0 && <= 99 Error value: "??"	2
05	Reserve	1	x	09	Constant 0	0		
06	Operation number	4	x	10	Numeric, 0001 to 9999		zero → "????" Numeric value >= 0 && <= 9999 Error value: "???"	3
07	Reserve	1	x	14	Constant 0	0		
08	Management type	1	x	15	1= New, 2=Change, 3= Deletion			
09	Work units	300	x	16	Individual WU= blank or numeric (000 to 999) 100 type key figures WUs with 3 Positions (= individual WU) Or: tenth decimal hours (i.e. 123 = 12.3 hours)	300 blanks each	zero → 0 According to formula calculation: >= 0 && <= 999 (depending on the formula, negative values or 'division by zero' can also result). Error value: "000"	
10	Note ID	1	x	316	X= Note present, blank= No note	Blank		
11	Additional operations-ID	1	x	317	X= Additional operation present, blank= No additional operations	Blank		
12	Picture number	4	x	318	Blank or numeric, 0001 to 9999	4 blanks	Always blank – not in use	
13	Wrk-No. (Included work No.)	4	x	322	Blank or numeric, 0001 to 9999	4 blanks	Numeric value >= 0 && <= 9999 Error value: " " (blanks)	
14	Reserve	1	x	326	Blanks, if Field 13 blanks, otherwise 0	Blank		

Table 6.7: Structure of record type 30 (work units) of “Master data 326” file

### **6.3.7 Note on Structure of Record Type 30 (Work Units)**

Category, family and model code are the key fields for determining the time values (= Fields 02, 03 and 09). In Field 09 the position of the time value in the field designates the model code(s) for which the value is valid. Field 09 contains work units (WU) or decimal hours (without ".") with a length of 300 characters, beginning with position 16. Each time value consists of 3 characters. Depending on the region set for the spoolout, the file contains values for the German domestic area in the format "WU", e.g. 012 = 12 WU, or for all other countries in the format decimal hours, e.g. 010 = 1.0 hours. ZM values are shown as 000.

#### **About the model codes:**

Position 16 to 18 means model code 00, i.e. valid for all model codes in this family

Position 19 to 45 should always be empty, model code 01 to 09 are not used

Position 46 to 48 = valid for sub-family 10, i.e. for all model codes from 11 to 19

Position 49 to 51 = only valid for model code 11

Position 73 to 75 = only valid for model code 19

Position 76 to 78 = for sub-family 20, i.e. for all model codes from 21 to 29

etc., etc...

Position 310 to 312 = model code 98

Position 313 to 315 = model code 99, reserved for dummy functions in financial systems  
(model code 99 means that all operation items are available without time values; this model code is used for very new or very old vehicles which are not  
(yet) documented in ASRA.)

A so-called sub-family groups a quantity of model codes, e.g. sub-family 10 means: all model codes from 11 to 19.

#### **Rules:**

If a value is entered for model code 00 (from position 16 to 18), the rest of the field must be empty, for "valid for all model codes" excludes individual values.

If a value is entered for model code 10 (= sub-family 10, position from 46 to 48), all other fields of this sub-family must be empty, i.e. the model codes 11 to 19, positions from 49 to 75, in addition the field for model code 00 must be empty.

If a value is entered for model code 11 (positions from 49 to 51), no values may be entered for model code 10 and model code 00.

### 6.3.8 Structure of the Record Type 31 (Notes/Additional Operations)

Field No	Field Designation	Length	Format	Pos	Explanations	Default Value	Value Ranges	Sorting
01	Record ID	2	x	01	31= Notes/Additional operations	31		
02	PC/CV ID	2	x	03	00= PC, 10= CV		zero → "??" Numeric value >= 0 && <= 99 Error value: "??"	1
03	Family group	2	x	05	Alphanumeric, 00 to ZZ		zero → "??" Alphanumeric value >= 0 && <= ZZ Error value: "??"	4
04	Design group	2	x	07	Numeric, 00 to 99		zero → "??" Numeric value >= 0 && <= 99 Error value: "??"	2
05	Reserve	1	x	09	Constant 0	0		
06	Operation number	4	x	10	Numeric, 0001 to 9999		zero → "????" Numeric value >= 0 && <= 9999 Error value: "???"	3
07	Reserve	1	x	14	Constant 0	0		
08	Management type	1	x	15	1= New, 2=Change, 3= Deletion			
09	Note	40	x	16	2 lines of 20 places each, alphanumeric	2x20 blanks each	zero → ""  Text which is too long will be cut off at the end.	
10	Additional operations	160	x	56	20 additional operation numbers with 8 places each  Individual additional operation number: blank  or numeric structure: Design group code length 2, Reserve length 1 (always 0), operation number length 4, Reserve length 1 (always 0)  If there are more than 20 additional operations, only the first 20 of them are output. All additional operations are available in the file 326 master data II, record type 32.	20x8 Blanks	> 20 additional operations: Only the first 20 are applied  Check DG + operation number: According to field 04 and field 06.	
11	Filler	111	x	216	Blank	Blank		

Table 6.8: Structure of record type 31 (notes/additional operations) of "Master data 326" file

## 6.4 „Master Data 326 II“ File

Each line of the "Master Data 326 II" file consists of 326 characters.  
The "Master Data 326 II" file currently has one record type:

Record Type 32 (operation-position relationships = extended additional operations)

The "Master Data 326 II" file is organized according to the category, family and model code (= fields 02, 09 and 10 in the file description of the 140 model designation file).

### 6.4.1 The header of the "Master Data 326 II" file for the "Domestic" region

Field No.	Field Designation	Length	Pos.	Explanation
1	Record ID	2	01	Hex 00 00
2	Filler	2	03	Blank
3	Implementation date	8	05	YYYYMMDD, in ASRA with field 08 (Change service New)  identical
4	Filler	2	13	Blank
5	ID  Immediate change service Old	1	15	S or blank  When passing on data, this field always contains a blank; for the immediate change service, an S is shown
6	Change service Old	8	16	YYYYMMDD, in complete file identical to Field 08;  in a supplementary file: Date of the version with which the comparison is made for creating the supplementary file
7	Filler	2	24	Blank
8	Change service New	8	26	YYYYMMDD, date of the current version
9	Filler	293	34	Blank

Table 6.9: Domestic header of "Master Data 326 II" file

In the complete file, Field 03, Field 06 and Field 08 are the same; they contain the date of the current version. In the supplementary file, Field 03 and Field 08 contain the date of the current version and Field 06 contains the date of the version with which the comparison is made for creating the supplementary file.

#### 6.4.2 Header of "Master Data 326 II" File for "Export" region

Field No.	Field Designation	Length	Pos.	Explanation
1	Record ID	2	01	Hex 00 00
2	Date of the current version	8	03	YYYYMMDD
3	Language ID	2	11	Numeric, 00 to 99
4	Filler	1	13	Blank
5	Version month/year	5	14	MM/YY
6	Filler	308	19	Blank

Table 6.10: Export header of "Master Data 326 II" file

#### 6.4.3 Footer of "Master Data 326 II" file

Field No.	Field Designation	Length	Pos.	Explanation
1	Record ID	2	01	Hex 9F 9F
2	Record counter	8	03	Number of records (not including start/end records) as a 15-digit number, including an "F" at the end, leading zeros at the beginning, Comp-3/EBCDIC coded
3	Filler	316	11	Blank

Table 6.11: Footer of "Master Data 326 II" file

The final record has the same structure in all files. Only the length of the filler at the end differs. The first 10 characters of the footer are packed in the EBCDIC/Comp-3 format (special COBOL coding). 20 characters consisting of "FFFF" + 15-digit number of the written records + "F" hexadecimal are interpreted for this purpose, in groups of 2 bytes mapped on the EBCDIC character set and compressed with it to 10 characters. The number of records is followed by a filler. The filler begins at position 10 and continues up to the record length of the file concerned.

#### 6.4.4 Structure of Record Type 32 (operation-position relationships = extended additional operations)

Field No.	Field Designation	Length	Format	Pos.	Explanation	Default value	Sorting
1	Record ID	2	X	01	32 = OP-OP relationships	32	
2	PC/CV ID	2	X	03	00 = PC, 10=CV		1
3	Family group	2	X	05	Alphanumeric, 00 to ZZ		4
4	Design group	2	X	07	Numeric, 00 to 99		2
5	Reserve	1	X	09	Constant 0	0	
6	Operation number	4	X	10	Numeric, 0001 to 9999		3
7	Reserve	1	X	14	Constant 0	0	
8	Management type	1	X	15	1 = New 2 = Change 3 = Delete	1	
9	Following record ID	2	X	16	Numeric, 01 to 99 99 = no following record 01 = first text following record 02 = second, etc. 99 = last	99	
10	OP-OP relationships	306	X	18	34 additional operation numbers with 9-digit individual additional operation numbers: Blank or numeric structure: - Type of additional operation relationship, "Z" for additional operation (placeholder for the future, currently only for additional operation relationships). - Design-group code length 2, reserve length 1 (always "0"), operation number length 4, reserve length 1 (always "0")	34x9 Blanks	
11	Filler	3	X	324	Blank	Blank	

Table 6.12: Structure of Record Type 32 of the file "Master Data 326 II" file

#### 6.5 „Table Data 84“ File

Each line of the "Table data 84" file consists of 84 characters.  
The "Table data 84" file is divided into 4 record types, i.e.

- Record type 02 (family group directory)
- Record type 03 (design group directory)
- Record type 04 (design group notes)
- Record type 05 (design-group table of contents)

### 6.5.1 The header of the “Table Data 84” File for the “Domestic” region

Field No.	Field Designation	Length	Pos	Explanations
01	Record ID	2	01	Hex 00 00
02	Filler	2	03	Blank
03	Implementation date	8	05	YYYYMMDD, in complete file identical to Field 07 (change service New) Identical
04	Filler	2	13	Blank
05	Change service Old	8	16	YYYYMMDD, in complete file identical to Field 07; in supplementary file: Date of version with which comparison is carried out for creation of the supplement
06	Filler	2	23	Blank
07	Change service New	8	25	YYYYMMDD, date of the current version
08	Filler	52	33	Blank

Table 6.13: Domestic header of "Table data 84" file

### 6.5.2 The header of the “Table Data 84” File for the “Export” region

Field No.	Field Designation	Length	Pos	Explanations
01	Record ID	2	01	Hex 00 00
02	Date of current Version	8	03	YYYYMMDD
03	Language ID	2	11	Numeric, 00 to 99
04	Filler	1	13	Blank
05	Version month/year	5	14	MM/YY
06	Filler	66	19	Blank

Table 6.14: Export header of "Table data 84" file

### 6.5.3 Footer of the “Table Data 84” File

Field No.	Field Designation	Length	Pos.	Explanations
01	Record ID	2	01	Hex 9F 9F
02	Record counter	8	03	Number of records (without starting/end records) as 15-digit number plus a final "F", leading zeros at front, Comp-3/EBCDIC coded
03	Filler	74	11	Blank

Table 6.15: Footer of “Table data 84” file

The first 10 characters of the footer are packed in the EBCDIC/Comp-3 format (special COBOL coding). 20 characters consisting of "FFFF" + 15-digit number of the written records + "F" hexadecimal are interpreted for this purpose, in groups of 2 bytes mapped on the EBCDIC character set and compressed with it to 10 characters. The number of records is followed by a filler. The filler begins at position 10 and continues up to the record length of the file concerned.

### 6.5.4 Structure of Record Type 02 (Family Group Directory)

Field No	Field Designation	Length	Format	Pos	Explanations	Default Value	Value Ranges	Sorting
01	Record ID	2	x	01	02= Family	02		
02	PC/CV ID	2	x	03	00= PC, 10= CV		zero → "??" Numeric value >= 0 && <= 99 Error value: "??"	1
03	Family	2	x	05	Alphanumeric, 00 to ZZ		zero → "??" Alphanumeric value >= 0 && <= ZZ Error value: "??"	2
04	Family designation	65	x	07	Alphanumeric	Blank	zero → "?" Text which is too long will be cut off at the end.	
05	Filler	5	x	72	Blank	5 Blanks		
06	Management type	1	x	77	1= New, 2=Change, blank = No change			
07	Book	2	x	78	Alphanumeric	2 Blanks	If book unknown: "??"	
08	Column	2	x	80	Alphanumeric	2 Blanks	If column unknown: "??"	
09	Filler	3	x	82	Blank	3 Blanks		

Table 6.16: Structure of record type 02 (family group directory) of “Table data 84” file

### 6.5.5 Structure of Record Type 03 (Design Group Directory)

Field No	Field Designation	Length	Format	Pos	Explanations	Default Value	Value Ranges	Sorting
01	Record ID	2	x	01	03= Design group directory	03		
02	PC/CV ID	2	x	03	00= PC, 10= CV		zero → "??" Numeric value >= 0 && <= 99 Error value: "??"	1
03	Design group	2	x	05	Numeric, 00 to 99		zero → "??" Numeric value >= 0 && <= 99 Error value: "??"	2
04	Reserve	1	x	07	Constant 0	0		
05	DG designation	30	x	08	Character string	Blanks	zero → "?" Text which is too long will be cut off at the end.	
06	Management type	1	x	38	1= New, 2=Change, blank = No change			
07	Filler	46	x	39	Blank	Blank		

Table 6.17: Structure of record type 03 (design group directory) of "Table data 84" file

### 6.5.6 Structure of Record Type 04 (Design Group Notes)

Field No	Field Designation	Length	Format	Pos	Explanations	Default Value	Value Ranges	Sorting
01	Record ID	2	x	01	04= Design group notes	04		
02	PC/CV ID	2	x	03	00= PC, 10= CV		zero → "??" Numeric value >= 0 && <= 99 Error value: "??"	1
03	Family group	2	x	05	Alphanumeric, 00 to ZZ		zero → "??" Alphanumeric value >= 0 && <= ZZ Error value: "??"	2
04	Design group	2	x	07	Numeric, 00 to 99		zero → "??" Numeric value >= 0 && <= 99 Error value: "???"	3
05	Reserve	1	x	09	Constant 0, for design group extension	0		
06	Line number	3	x	10	Numeric, 001 to 200		If more than 200 lines of text, then only the first 200 lines will be output.	
07	Notes text line	70	x	13	Blank or not equal to blank		zero → ""	
08	ID final line	1	x	83	* = Last line, blank = additional line			
09	Management type	1	x	84	1= New, 2=Change, blank = No change			

Table 6.18: Structure of record type 04 (design group notes) of "Table data 84" file

### 6.5.7 Structure of Record Type 05 (Design Group Table of Contents)

Field No	Field Designation	Length	Format	Pos	Explanations	Default Value	Value Ranges	Sorting
01	Record ID	2	x	01	05= Design-group table of contents	05		
02	PC/CV ID	2	x	03	00= PC, 10= CV		zero → "??" Numeric value >= 0 && <= 99 Error value: "???"	1
03	Family group	2	x	05	Alphanumeric, 00 to ZZ		zero → "??" Alphanumeric value >= 0 && <= ZZ Error value: "???"	2
04	Design group	2	x	07	Numeric, 00 to 99		zero → "??" Numeric value >= 0 && <= 99 Error value: "???"	3
05	Reserve	1	x	09	Constant 0	0		
6a	Operation number	5	x	10	Operation number, reserve zero at end	0	zero → "????" Numeric value >= 0 && <= 9999 Error value: "????"	4
6b	Design group  Table of contents text	60	x	15	not equal to blanks	Blank	zero → "" Text which is too long will be cut off at the end.	
07	Management type	1	x	75	1= New, 2=Change, blank = No change			
08	Filler	9	x	76	Blank	9 Blanks		

Table 6.19: Structure of record type 05 (design-group table of contents) of "Table data 84" file

## 6.6 “Model Designation 140” File

Each line of the "Model designation 140" file consists of 140 characters. The "Model designation 140" file only contains the record type 01.

### 6.6.1 The header of the “Model Designation 140” File for the “Domestic” region

Field No.	Field Designation	Length	Pos	Explanations
01	Record ID	2	01	Hex 00 00
02	Filler	2	03	Blank
03	Implementation date	8	05	YYYYMMDD, in ASRA with Field 09 (change service New) identical
04	Filler	2	13	Blank
05	Change service Old	8	15	YYYYMMDD, in complete file identical to Field 09; in supplementary file: Date of version with which comparison is carried out for creation of the supplement
06	Filler	2	23	Blank
07	Change service New	8	25	YYYYMMDD, date of the current version
08	Filler	108	33	Blank

Table 6.20: Domestic header of "Model designation 140" file

### 6.6.2 The header of the “Model Designation 140” File for the “Export” region

Field No.	Field Designation	Length	Pos	Explanations
01	Record ID	2	01	Hex 00 00
02	Date of current Version	8	03	YYYYMMDD
03	Language ID	2	11	Numeric, 00 to 99
04	Filler	1	13	Blank
05	Version month/year	5	14	MM/YY
06	Filler	122	19	Blank

Table 6.21: Export header of "Model designation 140" file

### 6.6.3 Footer of the “Model Designation 140” File

Field No.	Field Designation	Length	Pos	Explanations
01	Record ID	2	01	Hex 9F 9F
02	Record counter	8	03	Number of records (without starting/end records) as 15-digit number plus a final "F", leading zeros at front, Comp-3/EBCDIC coded
03	Filler	130	11	Blank

Table 6.22: Export footer of "Model designation 140" file

The first 10 characters of the footer are packed in the EBCDIC/Comp-3 format (special COBOL coding). 20 characters consisting of "FFFF" + 15-digit number of the written records + "F" hexadecimal are interpreted for this purpose, in groups of 2 bytes mapped on the EBCDIC character set and compressed with it to 10 characters.

The number of records is followed by a filler. The filler begins at position 10 and continues up to the record length of the file concerned.

### 6.6.4 Structure of “Model Designation 140” File (Record Type 01)

Field No	Field Designation	Length	Format	Pos	Explanations	Default Value	Value Ranges	Sorting
01	Record ID	2	x	01	01= Model designation type table	01		
02	PC/CV ID	2	x	03	00= PC, 10= CV		zero → "?" Numeric value >= 0 && <= 99 Error value: "???"	
03	Model designation	6	x	05	Model designation 6-digit, numeric, 0 to 9		zero → "??????" Numeric value >= 0 && <= 999999 Error value: "??????"	
04	Steering/State of disassembly	1	x	11	Blank, 0 to 9, A to Z	Blank	zero → "" Text which is too long will be cut off at the end.	
05	Manufacturer plant	1	x	12	Blank, 0 to 9, A to Z	Blank	zero → "" Text which is too long will be cut off at the end.	
06	Reserve	1	x	13	Blank	Blank		
07	Production sequence number from	6	x	14	Blank or numeric	Blank	zero → " " (blank) Numeric value >= 0 && <= 999999	
08	Production sequence number to	6	x	20	Blank if Field 07 = blank or numeric, of Field 07 numeric  Field 08 is greater than or equal to Field 07	Blank	zero → " " (blank) Numeric value >= 0 && <= 999999  If Field 07 is occupied: Numeric value of Field 08 >= Field 07	

09	Family group	2	x	26	Alphanumeric, 00 to ZZ		zero → "??" Alphanumeric value >= 0 && <= ZZ Error value: "???"	
10	Model code	2	x	28	Blank or 01 to 99		zero → "??" Numeric value (>= 11 && <= 19)    (>= 21 && <= 29)    (>= 31 && <= 39)    (>= 41 && <= 49)    (>= 51 && <= 59)    (>= 61 && <= 69)    (>= 71 && <= 79)    (>= 81 && <= 89)    (>= 91 && <= 99)    Error value: "???"	
11	Model	18	x	30	Model designation	Blank	zero → "" Text which is too long will be cut off at the end.	
12	Short designation	30	x	48	Explanatory information on model designation type or possible model code	Blank	zero → "" Text which is too long will be cut off at the end.	
13	Tonnage	1	x	78	A to Z	Blank	zero → "" Text which is too long will be cut off at the end.	
14	Management type	1	x	79	1= New, 2=Change, 3= Deletion			
15	Engine no. from	14	x	80	Blank, 0 to 9, A to Z	Blank	zero → " " (blank) Text which is too long will be cut off at the end.	
16	Engine no.to	14	x	94	Blank, 0 to 9, A to Z	Blank	zero → " " (blank) Text which is too long will be cut off at the end.	
17	Model year from	6	x	108	YYYYMM or blank	Blank	Year >= 1900 && <= 2100 Error value "??????"	
18	Model year to	6	x	114	YYYYMM or blank	Blank	Year >= 1900 && <= 2100 Error value "??????"	
19	Engine type	1	x	120	A to Z	Blank	zero → "" Text which is too long will be cut off at the end.	
20	Regulated CAT	1	x	121	Y/N	Blank	zero → "", only "Y" or "N" or " Text which is too long will be cut off at the end.	
21	Permissible gross vehicle weight	1	x	122	Maximum GVW <= 3.5 t? Y/N	Blank	zero → "", only "Y" or "N" or " Text which is too long will be cut off at the end.	
22	Counter	6	9	123	Numeric serial no. The model designation records, with Leading zeros filled up	Blank	zero → " " Counter >= 0 && <= 999999	1

23	Number of axes	1	9	129	0 - 9 or blank	Blank	zero → “ “ Numeric value >= 0 && <= 9 Error value: "?"	
24	Weight	3	x	130	Numeric or blank	Blank	zero → “ “ Numeric value > 0 && <= 999 Error value: "?"	
25	Reserve	8	x	133	Blank	Blank		

Table 6.23: Structure of "Model designation 140" file (record type 01)

## 6.7 “Model Designation 80” File

Each line of the "Model designation 80" file consists of 80 characters. The "Model designation 80" file only contains the record type 01.

### 6.7.1 The header of the “Model Designation 80” File for the “Domestic” region

Field No.	Field Designation	Length	Pos	Explanations
01	Record ID	2	01	Hex 00 00
02	Filler	2	03	Blank
03	Implementation date	8	05	YYYYMMDD, in ASRA with Field 09 (change service New) identical
04	Filler	2	13	Blank
05	Change service Old	8	15	YYYYMMDD, in complete file identical to Field 09; in supplementary file: Date of version with which comparison is carried out for creation of the supplement
06	Filler	2	23	Blank
07	Change service New	8	25	YYYYMMDD, date of the current version
08	Filler	48	33	Blank

Table 6.24: Domestic header of "Model designation 80" file

### 6.7.2 The header of the “Model Designation 80” File for the “Export” region

Field No.	Field Designation	Length	Pos	Explanations
01	Record ID	2	01	Hex 00 00
02	Date of current Version	8	03	YYYYMMDD
03	Language ID	2	11	Numeric, 00 to 99
04	Filler	1	13	Blank
05	Version month/year	5	14	MM/YY
06	Filler	62	19	Blank

Table 6.25: Export header of "Model designation 80" file

### 6.7.3 Footer of the “Model Designation 80” File

Field No.	Field Designation	Length	Pos	Explanations
01	Record ID	2	01	Hex 9F 9F
02	Record counter	8	03	Number of records (without starting/end records) as 15-digit number plus a final “F”, leading zeros at front, Comp-3/EBCDIC coded
03	Filler	70	11	Blank

Table 6.26: Export footer of “Model designation 80” file

The first 10 characters of the footer are packed in the EBCDIC/Comp-3 format (special COBOL coding). 20 characters consisting of "FFFF" + 15-digit number of the written records + "F" hexadecimal are interpreted for this purpose, in groups of 2 bytes mapped on the EBCDIC character set and compressed with it to 10 characters.

The number of records is followed by a filler. The filler begins at position 10 and continues up to the record length of the file concerned.

### 6.7.4 Structure of “Model Designation 80” File (Record Type 01)

**Note:** The sorting sequence for the “Model designation 80” file is dependent on the counter (Field 22 of the “Model designation 140” file). However, in this file the counter is not written.

Field No	Field Designation	Length	Format	Pos	Explanations	Default Value	Value Ranges	Sorting
01	Record ID	2	x	01	01= Model designation type table	01		
02	PC/CV ID	2	x	03	00= PC, 10= CV		zero → “??” Numeric value >= 0 && <= 99 Error value: “??”	
03	Model designation	6	x	05	Model designation 6-digit, numeric, 0 to 9		zero → “??????” Numeric value >= 0 && <= 999999 Error value: “??????”	
04	Steering/State of disassembly	1	x	11	Blank, 0 to 9, A to Z	Blank	zero → “” Text which is too long will be cut off at the end.	
05	Manufacturer plant	1	x	12	Blank, 0 to 9, A to Z	Blank	zero → “” Text which is too long will be cut off at the end.	
06	Reserve	1	x	13	Blank	Blank		
07	Production sequence number from	6	x	14	Blank or numeric	Blank	zero → “ ” (blank) Numeric value >= 0 && <= 999999	
08	Production sequence number to	6	x	20	Blank if Field 07 = blank or numeric, of Field 07 numeric  Field 08 is greater than or equal to Field 07	Blank	zero → “ ” (blank) Numeric value >= 0 && <= 999999  If Field 07 is occupied: Numeric value of Field 08 >= Field 07	

09	Family group	2	x	26	Alphanumeric, 00 to ZZ		zero → "??" Alphanumeric value >= 0 && <= ZZ Error value: "??"	
10	Model code	2	x	28	Blank or 01 to 99	Blank	zero → "??" Numeric value (>= 11 && <= 19)    (>= 21 && <= 29)    (>= 31 && <= 39)    (>= 41 && <= 49)    (>= 51 && <= 59)    (>= 61 && <= 69)    (>= 71 && <= 79)    (>= 81 && <= 89)    (>= 91 && <= 99)    Error value: "??"	
11	Model	18	x	30	Model designation		zero → "" Text which is too long will be cut off at the end.	
12	Short designation	30	x	48	Explanatory information on model designation type  or possible model codes if Field  10 = blank		zero → ""  Text which is too long will be cut off at the end.	
13	Tonnage	1	x	78	A to Z		zero → "" Text which is too long will be cut off at the end.	
14	Management type	1	x	79	1= New, 2=Change, blank = Deletion			
15	Filler	1	x	80	Blank, 0 to 9, A to Z	Blank		

Table 6.27: Structure of "Model designation 80" file (record type 01)

## 6.8 "AWERT 80" File

Each line of the "AWERT 80" file consists of 80 characters. In contrast to all other files which can be created with the ASRA data spooler, the "AWERT 80" file has neither a header nor a footer.

The "AWERT 80" file is divided into 7 record types, i.e.

- Record type 1-6 (operation texts)
- Record type 9 (work units)

### 6.8.1 Structure of Record Types 1 - 6 (Operation Texts) of the “AWERT 80” File

Each data record from the "AWERT 80" file is divided into six parts (record types). Each line is headed by the code of the data record, followed by a sub-record ID.

Field No.	Field Designation	Length	Pos	Explanations	Default Value	Value range	Sorting
01	Record type	1	01	1 to 6	1		4
02	Book number (Text book)	2	02	00= PC 10= CV	00	zero → "?" Numeric value >= 0 && <= 99 Error value: "???"  (here it is the category – not as for record type 9 then the book!)	3
03	Design group	2	04	Numeric, 00 to 99	00	zero → "?" Numeric value >= 0 && <= 99 Error value: "???"	1
04	Operation number	4	06	Numeric, 0001 to 9999	0000	zero → "????" Numeric value >= 0 && <= 9999 Error value: "???"	2
05	Line from	2	10	Constant 01	01		5
06	Line to (not in use)	2	12	Constant blank	Blank		
07	Change ID	1	14	1= New, 2=Change, 3=Deletion	1		6
08	Filler	14	15	Blank	Blank		
09	Text	30	29	Operation text	Blank	Combined test must not be empty  Minimum of 3 characters (search term 1 character + blank + activity 1 character), maximum of 180 characters  Search term + activity must not be empty or zero.  Error value: "?"  Text which is too long will be cut off at the end (longer than 6 lines).	
10	Filler	4	59	Blank	Blank		
11	Filler	6	63	Blank	Blank		
12	Supplement version Month/Year	5	69	Domestic: 5 blanks  Export: MM/YY, e.g.: 12/99	Blank		
13	Language code	2	74	Domestic: 2 blanks  Export: language code (e.g. 01, 02, etc.)	Blank		
14	Filler	5	76	Blank	Blank		

Table 6.28: Structure of record types 1 - 6 (operation texts) of “AWERT 80” file

## Description of special fields:

Field 07, change ID:

1 (>New), 2 (Change): All record types to be written with the same code have the same change ID

3 (Deletion): In case of deletion, only record type 1 will be written with 30 blanks

Field 09, Text:

The text from the supplement file (Field 10) is divided into 6 lines of 30 characters each.

The lines contain the record types 1 - 6. If Field 07 has the change ID 03 (= Deletion), then only record type 1 will be written with 30 blanks. The record types 2-5 are eliminated.

## 6.8.2 Structure of Record Type 9 (Work Units) of the “AWERT 80” File

Field No.	Field Designation	Length	Pos	Explanations	Default Value	Value Ranges	Sorting
01	Record type	1	01	9	9		4
02	Book number (Time book)	2	02	For example 02, 03, 18, 19, 20, 37, 38	00	Unknown book/(column): "??"	3
03	Design group	2	04	Numeric, 00 to 99	00	zero → "??" Numeric value >= 0 && <= 99 Error value: "??"	1
04	Operation number	4	06	Numeric, 0001 to 9999	0001	zero → "????" Numeric value >= 0 && <= 9999 Error value: "??"	2
05	Line number	2	10	Line number, numeric 01 to 99	01		5
06	Change character	1	12	1, 2, 3 or 4	1		6
0	Columns/Times	50	13	Up to 10 blocks of 5 characters each	Blank	Unknown book/column: "??" zero → 0 According to formula calculation: >= 0 && <= 999 (depending on the formula, negative values or 'division by zero' can also result). Error value: "000"	
08	Filler	6	63	Blank	Blank		
12	Supplement version Month/Year	5	69	Domestic: 5 blanks Export: MM/YY, e.g.: 12/99	Blank		
13	Language code	2	74	Domestic: 2 blanks Export: language code (e.g. 01, 02, etc.)	Blank		
14	Filler	5	76	Blank	Blank		

Table 6.29: Structure of record type 9 (work units) of “AWERT 80” file

## **Description of special fields:**

Field 02, book number of times book:  
For values, see Chapter 1.8.

Field 05, line number:  
The line number is counted up for the same design group, operation number and book/time number. If Field 07 consists of more than 50 characters, then 2 lines will be written, however with the same line number.

Field 06, change ID:  
1 = New; 2 = Change; 3 = Deletion of several blocks in Field 07; 4 = Deletion of the entire record within the same time book. The complete files are only written with the change ID 1.

Field 07, columns/times:  
Up to 10 blocks of 5 characters each  
Block consists of: xxxyy; with:  
yyy WU for domestic, tenths of an hour for export  
With less than 10 blocks, the field is filled with blanks.  
If more than 10 blocks must be written, then a next line is written for which the fields 01 - 06 remain the same (line number is retained!).

## **The following rules must be observed for the sorting of Field 07:**

Each family is written with the respective smallest converted work unit sorted in ascending order. If no work unit exists for a family, then the family is not written. The same family is only written once per line. If the same times exist (following conversion) for a family, then the time is only written once.

## **6.9 Note on Selecting and Using File Formats**

Especially when setting up a new adoption interface for ASRA spool data in another system, it must be ensured that the correct file formats are used. Here a note on this subject:

There are 2 types of ASRA spool files and structures for different kinds of financial systems.  
The correct flat rates for a vehicle can be identified with 2 methods:

- 1) Via book/column + line number
- 2) Via family/model code

The files with a record length of 80 are required by older financial systems like IDIS and DAVIS. These use the book/column system for the assignment of model designations to ASRA families and model codes and line numbers to assign the correct time values.

In the 80s work unit file, there is no direct relationship between the model code and a time value. Therefore, the line number is required to identify the time value.

**We urgently recommend the use of the new file structures with a record length of 326 for the work units file  
and a record length of 140 for the model designation file!**

The 326s master data file is organized by families and model codes. The book/column and line numbers are not required! The identification of the time values is carried out via the family and model code. This is the most reliable way to determine time values for a vehicle.

To determine the operation items valid for a certain vehicle, the vehicle must be specified with the category (00 for PC or 10 for CV), ASRA family and ASRA model code. With these data the valid operating items can then be determined either in the retrieval system WIS/ASRAnet or in the ASRA spool file.

The 140s model designation file is used to assign model designations to the ASRA category, family and model code.

## 6.10 Book/Column Assignment

The book/column assignment is defined for all categories/families via an assignment table:

Mapping Category/Family to Book/Column		
Category.Family	Book	Column
00.00	??	??
00.01	02	01
00.02	02	02
00.03	02	03
00.04	02	04
00.05	02	05
00.06	02	06
00.07	02	07
00.08	02	08
00.09	02	09
00.0A	02	21
00.0B	02	22
00.0C	02	23
00.0D	02	24
00.0E	02	25
00.0F	02	26
00.0G	02	27
00.0H	02	28
00.0I	02	29
00.0J	02	30
00.0K	02	31
00.0L	02	32
00.0M	02	33
00.0N	02	34
00.0P	02	35
00.0Q	02	36
00.0R	02	37
00.0S	02	38
00.0T	02	39
00.0U	02	40
00.0V	02	41
00.0W	02	42
00.0X	02	43
00.0Y	02	44
00.0Z	02	45
00.10	02	10
00.11	02	11
00.12	02	12
00.13	02	13
00.14	02	14
00.15	02	15
00.16	02	16
00.17	02	17
00.18	02	18
00.19	02	19
00.1A	02	46
00.1B	02	47
00.1C	02	48

00.1D	02	49
00.1E	02	50
00.1F	02	51
00.1G	02	52
00.1H	02	53
00.1I	02	54
00.1J	02	55
00.1K	02	56
00.1L	02	57
00.1M	02	58
00.1N	02	59
00.1P	02	60
00.1Q	02	61
00.1R	02	62
00.1S	02	63
00.1T	02	64
00.1U	02	65
00.1V	02	66
00.1W	02	67
00.1X	02	68
00.1Y	02	69
00.1Z	02	70
00.20	??	??
00.21	03	01
00.22	03	02
00.23	03	03
00.24	03	04
00.25	03	05
00.26	03	06
00.27	03	07
00.28	03	08
00.29	03	09
00.2A	03	21
00.2B	03	22
00.2C	03	23
00.2D	03	24
00.2E	03	25
00.2F	03	26
00.2G	03	27
00.2H	03	28
00.2I	03	29
00.2J	03	30
00.2K	03	31
00.2L	03	32
00.2M	03	33
00.2N	03	34
00.2P	03	35
00.2Q	03	36
00.2R	03	37
00.2S	03	38
00.2T	03	39
00.2U	03	40
00.2V	03	41
00.2W	03	42
00.2X	03	43

00.2Y	03	44
00.2Z	03	45
00.30	03	10
00.31	03	11
00.32	03	12
00.33	03	13
00.34	03	14
00.35	03	15
00.36	03	16
00.37	03	17
00.38	03	18
00.39	03	19
00.3A	03	46
00.3B	03	47
00.3C	03	48
00.3D	03	49
00.3E	03	50
00.3F	03	51
00.3G	03	52
00.3H	03	53
00.3I	03	54
00.3J	03	55
00.3K	03	56
00.3L	03	57
00.3M	03	58
00.3N	03	59
00.3P	03	60
00.3Q	03	61
00.3R	03	62
00.3S	03	63
00.3T	03	64
00.3U	03	65
00.3V	03	66
00.3W	03	67
00.3X	03	68
00.3Y	03	69
00.3Z	03	70
00.40	??	??
00.41	04	01
00.42	04	02
00.43	04	03
00.44	04	04
00.45	04	05
00.46	04	06
00.47	04	07
00.48	04	08
00.49	04	09
00.4A	04	21
00.4B	04	22
00.4C	04	23
00.4D	04	24
00.4E	04	25
00.4F	04	26
00.4G	04	27
00.4H	04	28

00.4I	04	29
00.4J	04	30
00.4K	04	31
00.4L	04	32
00.4M	04	33
00.4N	04	34
00.4P	04	35
00.4Q	04	36
00.4R	04	37
00.4S	04	38
00.4T	04	39
00.4U	04	40
00.4V	04	41
00.4W	04	42
00.4X	04	43
00.4Y	04	44
00.4Z	04	45
00.50	04	10
00.51	04	11
00.52	04	12
00.53	04	13
00.54	04	14
00.55	04	15
00.56	04	16
00.57	04	17
00.58	04	18
00.59	04	19
00.5A	04	46
00.5B	04	47
00.5C	04	48
00.5D	04	49
00.5E	04	50
00.5F	04	51
00.5G	04	52
00.5H	04	53
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00.5U	04	65
00.5V	04	66
00.5W	04	67
00.5X	04	68
00.5Y	04	69
00.5Z	04	70
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00.62	05	02

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00.66	05	06
00.67	05	07
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00.6C	05	23
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00.6E	05	25
00.6F	05	26
00.6G	05	27
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00.6I	05	29
00.6J	05	30
00.6K	05	31
00.6L	05	32
00.6M	05	33
00.6N	05	34
00.6P	05	35
00.6Q	05	36
00.6R	05	37
00.6S	05	38
00.6T	05	39
00.6U	05	40
00.6V	05	41
00.6W	05	42
00.6X	05	43
00.6Y	05	44
00.6Z	05	45
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00.72	05	12
00.73	05	13
00.74	05	14
00.75	05	15
00.76	05	16
00.77	05	17
00.78	05	18
00.79	05	19
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00.7C	05	48
00.7D	05	49
00.7E	05	50
00.7F	05	51
00.7G	05	52
00.7H	05	53
00.7I	05	54
00.7J	05	55
00.7K	05	56
00.7L	05	57
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00.7P	05	60
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00.7R	05	62
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00.7T	05	64
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00.7V	05	66
00.7W	05	67
00.7X	05	68
00.7Y	05	69
00.7Z	05	70
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00.83	06	03
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00.87	06	07
00.88	06	08
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00.8N	06	34
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00.8T	06	39
00.8U	06	40
00.8V	06	41
00.8W	06	42
00.8X	06	43
00.8Y	06	44
00.8Z	06	45
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00.92	06	12
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00.94	06	14
00.95	06	15
00.96	06	16
00.97	06	17

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00.9G	06	52
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00.9J	06	55
00.9K	06	56
00.9L	06	57
00.9M	06	58
00.9N	06	59
00.9P	06	60
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00.9R	06	62
00.9S	06	63
00.9T	06	64
00.9U	06	65
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00.9Y	06	69
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00.A8	09	00
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00.B7	08	76
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00.BW	14	76
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00.C2	07	52
00.C3	07	77
00.C4	08	02
00.C5	08	27
00.C6	08	52
00.C7	08	77
00.C8	09	02
00.C9	09	27
00.CA	09	52
00.CB	09	77
00.CC	10	02

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00.CE	10	52
00.CF	10	77
00.CG	11	02
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00.CJ	11	77
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00.CL	12	27
00.CM	12	52
00.CN	12	77
00.CP	13	02
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00.CR	13	52
00.CS	13	77
00.CT	14	02
00.CU	14	27
00.CV	14	52
00.CW	14	77
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00.CY	15	27
00.CZ	15	52
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00.D2	07	53
00.D3	07	78
00.D4	08	03
00.D5	08	28
00.D6	08	53
00.D7	08	78
00.D8	09	03
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00.DX	15	03

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00.E5	08	29
00.E6	08	54
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00.E8	09	04
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00.EJ	11	79
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00.EN	12	79
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00.ES	13	79
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00.F5	08	30
00.F6	08	55
00.F7	08	80
00.F8	09	05
00.F9	09	30
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00.FW	14	80
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00.FY	15	30
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00.G2	07	56
00.G3	07	81
00.G4	08	06
00.G5	08	31
00.G6	08	56
00.G7	08	81
00.G8	09	06
00.G9	09	31
00.GA	09	56
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00.GR	13	56
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00.GT	14	06
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00.GX	15	06
00.GY	15	31
00.GZ	15	56
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00.H2	07	57

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00.H6	08	57
00.H7	08	82
00.H8	09	07
00.H9	09	32
00.HA	09	57
00.HB	09	82
00.HC	10	07
00.HD	10	32
00.HE	10	57
00.HF	10	82
00.HG	11	07
00.HH	11	32
00.HI	11	57
00.HJ	11	82
00.HK	12	07
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00.HM	12	57
00.HN	12	82
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00.HW	14	82
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00.HY	15	32
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00.I6	08	58
00.I7	08	83
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00.I9	09	33
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00.II	11	58
00.IJ	11	83
00.IK	12	08
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00.IM	12	58

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00.IW	14	83
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00.IZ	15	58
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00.J2	07	59
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00.J4	08	09
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00.J8	09	09
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00.JE	10	59
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00.JI	11	59
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00.L6	08	61
00.L7	08	86
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00.LA	09	61
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00.LI	11	61
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00.M5	08	37
00.M6	08	62
00.M7	08	87
00.M8	09	12
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00.MA	09	62
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00.NJ	11	88
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00.NZ	15	63
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00.P8	09	14
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00.PX	15	14

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00.QY	15	40
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00.R2	07	66
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00.R6	08	66
00.R7	08	91
00.R8	09	16
00.R9	09	41
00.RA	09	66
00.RB	09	91
00.RC	10	16
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00.RF	10	91
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00.RK	12	16
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00.RN	12	91
00.RP	13	16
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00.RR	13	66
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00.RY	15	41
00.RZ	15	66
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00.S6	08	67
00.S7	08	92
00.S8	09	17
00.S9	09	42
00.SA	09	67
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00.SF	10	92
00.SG	11	17
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00.SI	11	67
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00.SK	12	17
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00.SV	14	67
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00.SZ	15	67
00.T0	07	18
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00.T2	07	68

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00.T6	08	68
00.T7	08	93
00.T8	09	18
00.T9	09	43
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00.TE	10	68
00.TF	10	93
00.TG	11	18
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00.TK	12	18
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00.U3	07	94
00.U4	08	19
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00.U7	08	94
00.U8	09	19
00.U9	09	44
00.UA	09	69
00.UB	09	94
00.UC	10	19
00.UD	10	44
00.UE	10	69
00.UF	10	94
00.UG	11	19
00.UH	11	44
00.UI	11	69
00.UJ	11	94
00.UK	12	19
00.UL	12	44
00.UM	12	69

00.UN	12	94
00.UP	13	19
00.UQ	13	44
00.UR	13	69
00.US	13	94
00.UT	14	19
00.UU	14	44
00.UV	14	69
00.UW	14	94
00.UX	15	19
00.UY	15	44
00.UZ	15	69
00.V0	07	20
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00.V2	07	70
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00.V4	08	20
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00.VY	15	45
00.VZ	15	70
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00.W2	07	71
00.W3	07	96
00.W4	08	21
00.W5	08	46
00.W6	08	71
00.W7	08	96

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00.WT	14	21
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00.WV	14	71
00.WW	14	96
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00.WZ	15	71
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00.X2	07	72
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00.XE	10	72
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00.XM	12	72
00.XN	12	97
00.XP	13	22
00.XQ	13	47
00.XR	13	72
00.XS	13	97

00.XT	14	22
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00.XW	14	97
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00.XZ	15	72
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00.Y3	07	98
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00.Y7	08	98
00.Y8	09	23
00.Y9	09	48
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00.YB	09	98
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00.YF	10	98
00.YG	11	23
00.YH	11	48
00.YI	11	73
00.YJ	11	98
00.YK	12	23
00.YL	12	48
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00.YN	12	98
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00.YS	13	98
00.YT	14	23
00.YU	14	48
00.YV	14	73
00.YW	14	98
00.YX	15	23
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00.Z0	07	24
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00.Z2	07	74
00.Z3	07	99
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00.Z6	08	74
00.Z7	08	99
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00.ZF	10	99
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00.ZL	12	49
00.ZM	12	74
00.ZN	12	99
00.ZP	13	24
00.ZQ	13	49
00.ZR	13	74
00.ZS	13	99
00.ZT	14	24
00.ZU	14	49
00.ZV	14	74
00.ZW	14	99
00.ZX	15	24
00.ZY	15	49
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10.0T	18	39
10.0U	18	40
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10.0W	18	42
10.0X	18	43

10.0Y	18	44
10.0Z	18	45
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10.DW	30	78
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10.I0	23	08
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10.IY	31	33
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10.JA	25	59
10.JB	25	84
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10.JE	26	59
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10.ZT	30	24
10.ZU	30	49
10.ZV	30	74
10.ZW	30	99
10.ZX	31	24
10.ZY	31	49
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