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# **ASRA Data Spooler**

**Based on WIS/ASRA - DVD**

**User documentation**

<b>1</b>	<b>The ASRA Data Spooler</b>	<b>4</b>
1.1	Function of the ASRA Data Spooler	4
<b>2</b>	<b>Usage of the ASRA Data Spooler Graphic User Interface</b>	<b>4</b>
2.1	Program Start	4
2.2	The License Check Performed by the ASRA Data Spooler	4
2.3	The ASRA Data Spooler User Interface	5
2.3.1	<i>Selection of Dialog Language and Output of Version</i>	5
2.3.2	<i>Selection of the Spoolout Language</i>	5
2.3.3	<i>Selection of the Spoolout Files</i>	6
2.3.4	<i>The output format</i>	7
2.3.5	<i>Specifying the Spoolout Directory</i>	7
2.3.6	<i>Selection of the Correct Time Mode</i>	8
<b>3</b>	<b>The Spoolout Process</b>	<b>8</b>
3.1	Starting the Spoolout Process	9
3.2		9
3.3	Possible ASRA Data Spooler Error Messages	10
3.4	Manual Cancellation of the Spoolout Process	10
3.5	Successful Conclusion of the Spoolout Process	11
3.6	The Log File	11
<b>4</b>	<b>The Output Formats</b>	<b>11</b>
4.1	The Output Format ASCII (ISO 8859-1)	11
4.2	The Output Format UCS2	12
4.3	The Output Format UTF8	12
<b>5</b>	<b>The ASRA Data Spooler Initialization File</b>	<b>12</b>
5.1	awatdc.ini: The File Size Entries in the [default] Section	13
5.2	awatdc.ini: The File Name Entries in the [spoolfiles] Section	13
5.3	awatso.ini: "Language" entry in section [application]	14
5.4	awatso.ini: Entry in section [default]	14
<b>6</b>	<b>File Description</b>	<b>15</b>
6.1	File Overview	15
6.2	The "326 master data" File	17
6.2.1	<i>The Header in the "326 master data" File for the "domestic" Region</i>	17
6.2.2	<i>The Header in the "326 master data" File for the "Export" Region</i>	18
6.2.3	<i>The Footer for the "326 master data" File</i>	18
6.2.4	<i>Structure of the Record type 10 (Job texts) in the "326 master data" File</i>	19
6.2.5	<i>Structure of the Record type 20 (Included texts) in the "326 master data" File</i>	20
6.2.6	<i>Structure of the Record type 30 (Work units) in the "326 master data" File</i>	21
6.2.7	<i>Structure of the Record type 31 (Notes/Additional operations)</i>	22
6.3	The "84 Table Data" File	22
6.3.1	<i>The Header in the "84 Table Data" File for the "Domestic" Region</i>	23
6.3.2	<i>The Header in the "84 Table Data" File for the "Foreign" Region</i>	23
6.3.3	<i>The Footer for the "84 Table Data" File</i>	23
6.3.4	<i>Structure of the Record Type 02 (Family group directory)</i>	23
6.3.5	<i>Structure of the Record Type 03 (Design group directory)</i>	25
6.3.6	<i>Structure of the Record Type 04 (Design Group notes)</i>	25
6.3.7	<i>Structure of the Record Type 05 (Design group table of contents)</i>	26

6.4	The “140 model designation” File .....	26
6.4.1	<i>The Header in the “140 model designation” File for the “Domestic” Region.....</i>	<i>26</i>
6.4.2	<i>The Header in the “140 model designation” File for the “Foreign” Region .....</i>	<i>27</i>
6.4.3	<i>The Footer for the “140 model designation” File.....</i>	<i>27</i>
6.4.4	<i>Structure of the “140 model designation” File (Record Type 01) .....</i>	<i>28</i>
6.5	The “80 model designation” File .....	28
6.5.1	<i>The Header in the “80 model designation” File for the “Domestic” Region .....</i>	<i>29</i>
6.5.2	<i>The Header in the “80 model designation” File for the “Export” Region.....</i>	<i>29</i>
6.5.3	<i>The Footer for the “80 model designation” File.....</i>	<i>29</i>
6.5.4	<i>Structure of the “80 model designation” File (record type 01) .....</i>	<i>30</i>
6.6	The “80 flat rate” File.....	30
6.6.1	<i>Structure of Record Types 1 - 6 (Job texts) in the “80 flat rate” File.....</i>	<i>31</i>
6.6.2	<i>Structure of Record type 9 (work units) in the “80 flat rate” File.....</i>	<i>32</i>

## 1 The ASRA Data Spooler

### 1.1 Function of the ASRA Data Spooler

The ASRA Data Spooler makes it possible to spool out data for conventional interfaces from the WIS/ASRA-DVD. The ASRA Data Spooler is included on each DVD with the items supplied with WIS-ASRA.

For information about installation and operating of the ASRA Data Spooler please read the „Operation Manual“ for the EWA net installation.

You'll find the documentation of the ASRA Data Spooler on the WIS/ASRA net DVD and in the download area "documentation for administrators" in the EWAnet navigation bar.

## 2 Usage of the ASRA Data Spooler Graphic User Interface

Before files can be prepared using the ASRA Data Spooler, various settings must be made that have an effect on the preparation of the files. The following sections explain these options.

### 2.1 Program Start

To use the ASRA Data Spooler, the EWA net basic system including the WIS/ASRA net data must be installed. Additionally, the data spooler has to be installed separately from the first WIS/ASRA DVD.

The ASRA Data Spooler can only be operated on the server on which the EWA net server has been installed, because it needs access to the database and the local licenses.

After the installation of EWA net on the server, the icon for the start of the data spooler is displayed in the favourites of the internet explorer in the directory "EWA net" and it is integrated as well in the Windows start menu under "EWA net".

The data spooler can also be started directly from the installation directory:  
[EWA\_HOME]:\spooler\awatso.exe

### 2.2 The License Check Performed by the ASRA Data Spooler

The ASRA Data Spooler checks whether a valid WIS net license is available prior to each program start. Furthermore, the WIS license must include a license for ASRA net. If one of these two conditions is not met, the ASRA Data Spooler quits with an error message.

## 2.3 The ASRA Data Spooler User Interface

Following the start of the ASRA Data Spooler, the user interface appears (see Fig. 2.01).

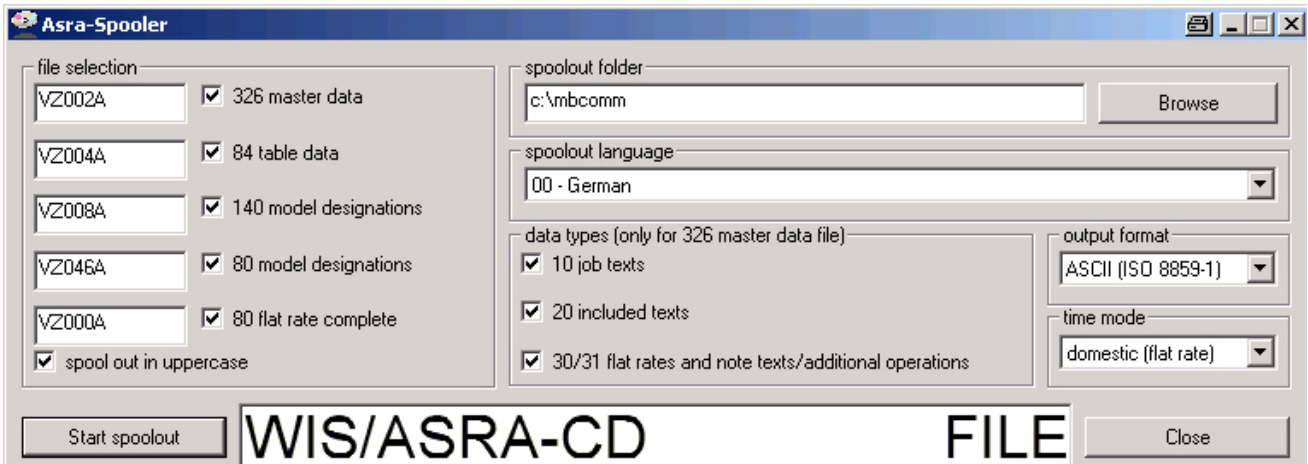


Fig. 2.01: The ASRA Data Spooler User Interface

### 2.3.1 Selection of Dialog Language and Output of Version

The language for the dialog boxes can be set in the ASRA Data Spooler menu. The language selected is check-marked. When the program is exited, the language is then saved so that it is active the next time the program is started.

The dialog language cannot be selected when spooling.

In order to display the version number of the ASRA data spooler, this select the ?/Info in the menu bar.

### 2.3.2 Selection of the Spoolout Language

The language in which the files are to be spooled out is selected in the “Spoolout language” box. This box contains a list of all ASRA languages that are available on the WIS/ASRA net DVD (see Fig. 2.02).

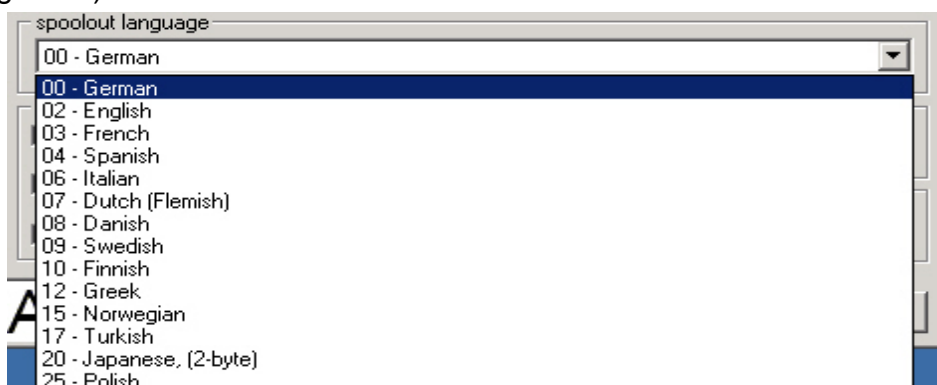


Fig. 2.02: The “Spoolout language” Box

The language selection has no effect on the model designation 80/140 model table files, as these files were prepared independent of the language.

### 2.3.3 Selection of the Spoolout Files

The ASRA Data Spooler provides five different file types that are shown in the “File selection” field (see Fig 2.03).

File Name	Description	Selected
VZ002A	326 master data	<input checked="" type="checkbox"/>
VZ004A	84 table data	<input checked="" type="checkbox"/>
VZ008A	140 model designations	<input checked="" type="checkbox"/>
VZ046A	80 model designations	<input checked="" type="checkbox"/>
VZ000A	80 flat rate complete	<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/> spool out in uppercase

Fig. 2.03: The “File selection” Field

The white check boxes beside the file names are used to select or clear the related files (see Fig. 2.04).

VZ008A	<input checked="" type="checkbox"/> 140 model designations
--------	--

Fig. 2.04: The “140 model designation” File is not to be Spooled Out.

The entry fields with white or gray background to the left of the check boxes contain the file names defined for the related file. However, it is also possible to replace these file names with others (see Fig. 2.05).

VZ004A	<input checked="" type="checkbox"/> 84 table data
--------	---

Fig. 2.05: Changed File Name for the File “84 table data”

**Note:** The file names defined in the entry fields are dependent on the spoolout language selected. Thus, the “326 master data file”, for example, is called “VZ122A” in French, but “VZ322A” in Danish.

If the “326 master data” file is selected, the data types (again using check boxes) that the file is to contain can be selected in the “Data type (only for 326 master data)” field. The data types “job texts”, “included texts” and “flat rates and note texts/additional operations” are available (see Fig. 2.06). At least one data type must be selected if the file “326 master data” is selected.

Data Type	Selected
10 job texts	<input checked="" type="checkbox"/>
20 included texts	<input checked="" type="checkbox"/>
30/31 flat rates and note texts/additional operations	<input checked="" type="checkbox"/>

Fig. 2.06: The “data types (only for 326 master data file)” Field

At the bottom of the “file selection” field is the “spoolout in uppercase” checkbox (see Fig. 2.03), which can only be selected for the output format ASCII. If this check box is selected, the ASRA Data Spooler automatically converts all text into upper case. However, if this check box is not selected, all text is spooled out of the database unchanged.

### 2.3.4 The output format

The ASRA Data Spooler supports three different output format for the spoolout files; these can be selected in the “output format” box (see Fig. 2.07).

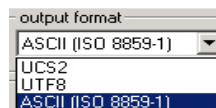


Fig. 2.07: The “output format” Box

For spoolout language that cannot be represented using the ASCII character set (currently Greek, Russian, Korean and Japanese), only two formats are provided here (UCS, UTF8). More information on the different formats is given in Chapter 4.

### 2.3.5 Specifying the Spoolout Directory

The ASRA Data Spooler saves all spoolout files as well as the log file and the temporary files in one directory. This directory can be entered in the “spoolout folder” field (see Fig. 2.08).

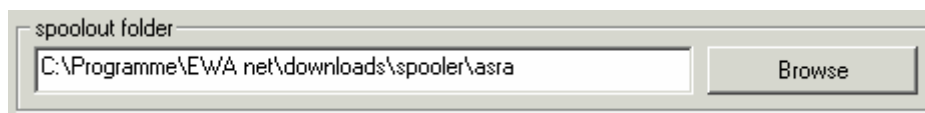


Fig. 2.08: The “Spoolout folder” Field

The spoolout directory can be specified in two ways. The spoolout path name can be typed directly in the white entry field using the keyboard, or the path can be specified by clicking the “browse” button. Clicking “browse” opens a dialog box in which the directory can be selected (see Fig. 2.09).

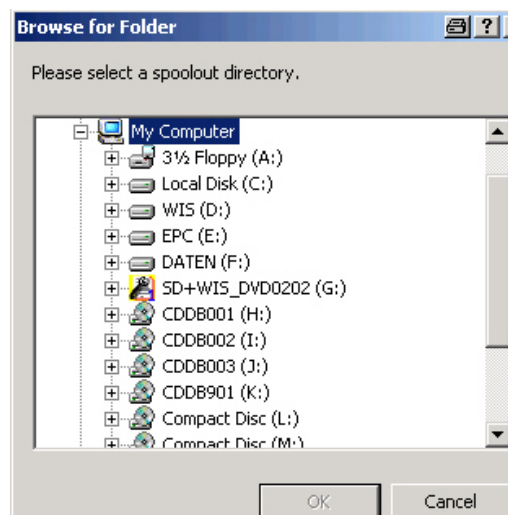


Fig. 2.09: The Directory Dialog Box

**Advice:** With the start of the program the spooler automatically proposes a spoolout path. This should be used so that EWA net users can access the spoolout files via the web user interface.

### 2.3.6 Selection of the Correct Time Mode

The following assumes that a valid domestic license has been installed. Otherwise only a spoolout for time mode “Foreign (hour)” will be permitted in all languages.

The ASRA Data Spooler differentiates between two regions (“domestic” and “foreign”); a specific time data format is allocated to each of these regions.

“domestic” region = “WU” (= work unit),

“foreign” region = “hour” (= decimal hour)

For all spoolout language except German, files can only be created in the “hour” time mode. If the “German” spoolout language is selected, the correct time mode must be selected in the “time mode” box (see Fig. 2.10).

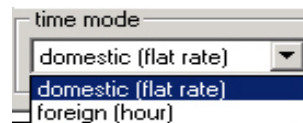


Fig. 2.10: The “time mode” Box with spoolout language “German”

The ASRA Data Spooler detects the region in which WIS/ASRA net is licensed at the start. The correct “time mode” is suggested for the “German” spoolout language. If this “time mode” is manually changed, the ASRA Data Spooler displays a warning message, but nevertheless starts the spoolout if the user accepts this message (see Fig. 2.11).

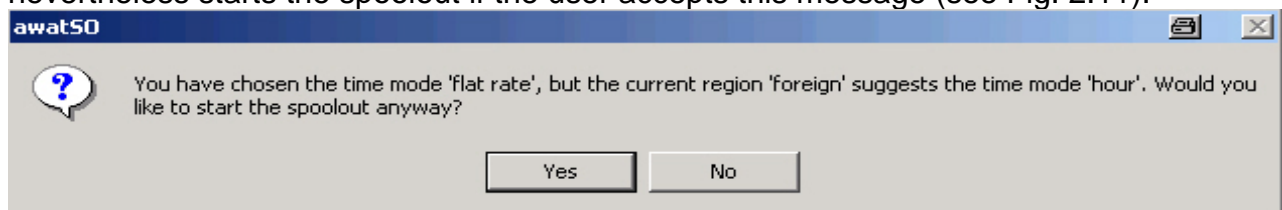


Fig. 2.11: Warning Message if an Inappropriate Region is Selected

Note: An incorrect setting of the time mode will result in incorrect times that cannot be detected as such by the user!

## 3 The Spoolout Process

After all the necessary settings have been made (as described in the previous sections), the selected files can be spooled out.



### 3.1 Starting the Spoolout Process

The spoolout process is initiated by clicking the “Start spoolout” button (see Fig. 2.12).

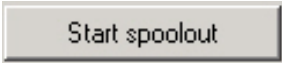


Fig 2.12: The “Start spoolout” Button

The ASRA Data Spooler then checks for various conditions that would impede correct processing and, in case of doubt, displays a warning or error message.

Among other issues, the ASRA Data Spooler checks whether:

- There is enough hard disk space on the hard disk specified,  
( = comparison between the value estimated by DC and the actual free space; however it is still possible to start the spoolout if the user is sure that there is enough free space)
- The spoolout directory can be created
- The files given already exist in the spoolout directory.

If the ASRA Data Spooler does not find any errors, the spoolout process is started and the appearance of the used interface changes (see Fig. 2.13).

All entry fields and boxes are replaced by a large white window that displays the messages on progress, warning messages, and error messages. These messages appear in English.

When in the field at the bottom of this window the arrow moves from “WIS/ASRA-CD” to “FILE”, the ASRA Data Spooler is working.

In addition, the blue progress bar indicates the overall progress of the spoolout process in %.

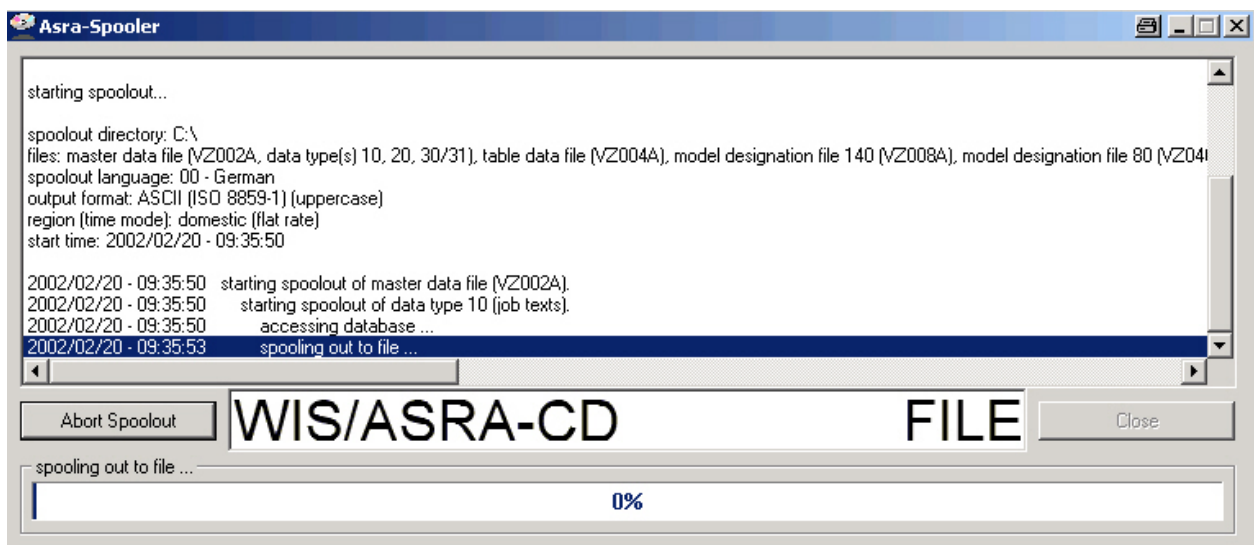


Fig. 2.13: The User Interface After the Spoolout Process is Started

### 3.2

### 3.3 Possible ASRA Data Spooler Error Messages

The ASRA Data Spooler is designed so that it only cancels the spoolout process in critical situations. There are three different error messages:

- A warning message (“WARNING”) indicates that there were “inconsistencies” during the spoolout, e.g. text on the DVD that is too long to be fully written to the spoolout file. If such a message is displayed, the spoolout is continued, the text in the spoolout file is then incomplete. Rectification: Correction in the online translation of the ASRA-ES-DB.
- An error message (“ERROR”) is displayed if a condition occurs that prevents continued spoolout of the current file; e.g. the WIS/ASRA-DVD does not provide any results for a specific query. If this message is shown, the ASRA Data Spooler cancels the preparation of the current file so that it can continue with the next file in its list.
- A serious error message (“FATAL ERROR”) only occurs if it is not possible to continue the spoolout. Reasons for this situation, for instance, are a serious database error or a full hard disk. The ASRA Data Spooler cancels the spoolout process after this message.

### 3.4 Manual Cancellation of the Spoolout Process

The user can quit an ongoing spoolout process early on by clicking “Abort spoolout” (see Fig. 2.14).

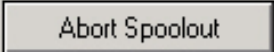


Fig. 2.14: The “Abort spoolout” Button

The ASRA Data Spooler then quits the spoolout process (see Fig 2.15).

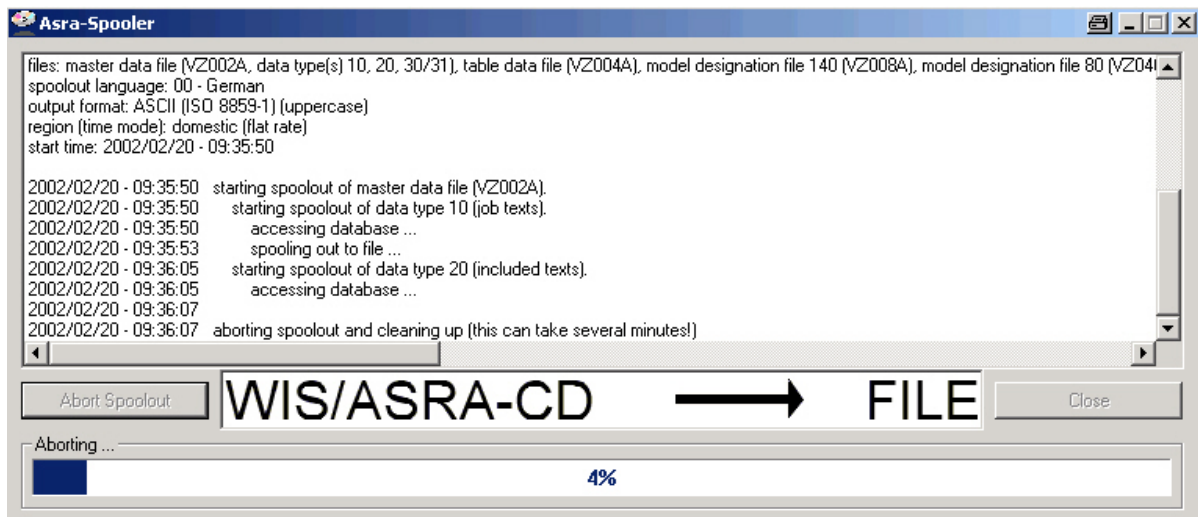


Fig. 2.15: The ASRA Data Spooler Requests the User to Wait for the End of the Spoolout Process.

Once the ASRA Data Spooler has cancelled the spoolout process, it is only necessary to click “OK” to return to the original user interface (see Fig. 2.16).



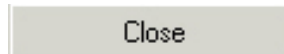
Fig. 2.16: The “OK” Button

**Note:** In some circumstances, canceling the spoolout process early can take **several minutes**.

### 3.5 Successful Conclusion of the Spoolout Process

If the ASRA Data Spooler has quit the spoolout process without the manual intervention of the user, then it is only necessary to click the “OK” button (see Fig 2.17) to return to the original ASRA Data Spooler entry screen. Here it is then possible to start a new spoolout process.

Clicking “Close” quits the ASRA Data Spooler (see Fig 2.17).



*Fig 2.17: The “Close” Button*

### 3.6 The Log File

Along with the spoolout files, the ASRA Data Spooler also creates a text file that contains the history of the spoolout process including all error messages and warning messages.

The name of this log file is “awatLog({Year}-{Month}-{Day} – {Hour}-{Minute}).log”, whereby the name in brackets contains the time (i.e. date, time of day) when the spoolout was started.

In this way it is possible to unambiguously allocate a log file to a set of spoolout files.

A tip for quality control:

- 1) Log file (check for error messages, see 3.2)
- 2) MB size (compare with order of magnitude of the related files for the predecessor version)
- 3) Random time checks (comparison of times on the DVD and in the spool file)
- 4) Completeness up to 98-.... (visual check for completeness of the spool files; are all families/all KG/etc. present?)

## 4 The Output Formats

The ASRA Data Spooler supports three different output formats. In the following the properties of these output formats are explained in more detail.

### 4.1 The Output Format ASCII (ISO 8859-1)

Each character is represented by one byte in the ASCII format. In this way the ASCII character set permits up to a maximum of 255 characters. The “ISO 8859-1” standard defines the characters that are allocated to these 255 different values.

As the ASRA Data Spooler (depending on the WIS/ASRA net version) currently supports up to 18 different languages, it is not possible to represent all these languages in the ASCII format that only provides 255 characters of fixed definition.

For this reason the ASRA Data Spooler has a list of character set rules that define which character is represented by which character(s) in the ASCII character set.

However, using the ASRA Data Spooler it is not possible to generate Japanese, Greek, Korean or Russian text in the ASCII format. This is because these languages contain too many characters that cannot be represented in a readable manner in the ASCII format.

## 4.2 The Output Format UCS2

The output format UCS2, also called Unicode, contains two bytes for each character. This format thus provides enough space to represent complex languages like Japanese, for example.

The first two bytes of each spoolout file in UCS2 format indicate whether the file is maintained in "Little Endian" or "Big Endian".

The byte sequence "0xFFFE" indicates that the file is written in "Little Endian", whereby the character "A" is saved as "0x4100". The data spooler always creates the UCS2 files in this format.

**Note:** The majority of the spoolout files contain a byte sequence in the header comprising two null bytes (in UCS2 four null bytes); this marks the start of the file. Some text editors misunderstand this byte sequence in UCS2 files as the end of the file and thus do not display the file. To get around this problem, this byte sequence must be deleted using a Hex editor. The text editors mentioned can then correctly display the files.

## 4.3 The Output Format UTF8

This output format represents characters with a variable number of bytes. Each ASCII character is represented by one byte; all further characters are represented with two or three bytes. For example, the majority of Japanese characters are represented by three bytes. The UTF8 format is very popular because it uses less space than UCS2 for the majority of texts.

## 5 The ASRA Data Spooler Initialization File

All important settings for the ASRA Data Spooler are saved in three different ini files which are found in the same directory as the ASRA Data Spooler (in installation drive at [EWA\_HOME]\spooler\).

The three ini files are of the following form:

File 1: „awatfm.ini“ contains the font mapping tables, the setting for the language in which a spoolout is to be preformed in ASCII and if a change into uppercase letters is allowed, and

which output formats support which languages. This file is not modified by the program and may not be modified by the user.

File 2: „awatdc.ini“ contains the requirements of DC for the size of the spoolout files and the file names for the files to be spooled out (depends on language). This file is not modified by entries made in the ASRA data spooler. This means that file names that have been changed will not be saved when program is exited. This file may also not be modified by the user.

File 3: „awatso.ini“ contains all parameters that can be set by the user. The language selected, file selection (which files are to be spooled out), spool path, spool language, file format and capitalization. Entries in this file will be saved by the program when exited. User-defined settings in the AWATSO.ini file will remain intact and will not be erased when the software is updated. This ini file is normally saved to the user's hard drive when the program is first installed and then no longer modified.

The following information explains several entries out of the ini files and is only relevant if an ASRA Data Spooler is used that runs on a WIS/ASRA net server.

### 5.1 awatdc.ini: The File Size Entries in the [default] Section

The entries “SizeJobTexts”, “SizeIncludedTexts”, “SizeWorkUnits”, “Size84TableData”, “Size140ModelDesignation”, “Size80ModelDesignation” and “Size80WUnits” in the [default] section define how much space (in kilobytes) the spoolout files in ASCII format will probably require on the hard disk. For the formats UCS2 and UTF8, twice these values is assumed.

The ASRA Data Spooler calculates a space limit from these figures. If the free space on the hard disk selected for the spoolout is less than the limit calculated, the ASRA Data Spooler displays a warning message prior to each spoolout task.

To avoid this warning message, more space must be provided. .

### 5.2 awatdc.ini: The File Name Entries in the [spoolfiles] Section

In the [spoolfiles] section each line represents a spoolout language. Thus “%00%”, for example, stands for “German Domestic”, “%01%” for “German Foreign” or “%12%” for “Greek Export”.

The five character strings (separated by commas) after the equals sign on each line represent the names of the spoolout files for a language as they appear as default file names in the ASRA Data Spooler user interface. Here the first name is for the 326 master data file, the second name for the 84 master data file, etc.

A “%NONE%” as a file name is interpreted by the ASRA Data Spooler as an empty character string. In the related language this file would therefore have no default file name.

To use other default files names, these entries can be changed instead of manually overwriting the names each time.

### 5.3 awatso.ini: “Language” entry in section [application]

ASRA data spooler supports the dialog languages Germany and English. There are two different ways to switch between these two languages.

First, the dialog language can be set in the program’s “Language” menu. This entry is saved when the program is exited.

Second, the “Language” entry can itself be changed. To do this open the “awatso.ini” file with a text editor program. To change to English, the “Language” entry must be changed to 2. For German, the entry must be changed to “0” (zero).

After the file is saved, the ASRA data spooler will be in the language set after being restarted.

### 5.4 awatso.ini: Entry in section [default]

In addition to the section [application] with the language entry there is another section [default]. This section usually contains 8 entries. In the following is a short explanation of these entries along with an example:

1. 326MasterData=1  
- Do you want to spool out the 326 master data file? 1=yes, 0=no
2. 84TableData=1  
- Do you want to spool out the 84 table data file? 1=yes, 0=no
3. 140ModelDesignation=1  
- Do you want to spool out the 140 model designation file? 1=yes, 0=no
4. 80ModelDesignation =1  
- Do you want to spool out the 80 model designation file? 1=yes, 0=no
5. 80WUnit=1  
- Do you want to spool out the 80 complete flat rate file? 1=yes, 0=no
6. RecordTypeJobTexts=1  
- Do you want to select record type job texts for 326 master data? 1=yes, 0=no
7. RecordTypeIncludedtexts=1  
- Do you want to select record type included texts for 326 master data? 1=yes, 0=no
8. RecordTypeWorkUnits=1  
- Do you want to select record type job texts and notes/additional operations for 326 master data? 1=yes, 0=no
9. Uppercase=1  
- Do you want to change to uppercase letters during spoolout? 1=yes, 0=no
10. Path=C:\Programme\EWA net\downloads\spooler\asra  
- Folder to which the spoolout files are saved
11. SpoolSprache=2  
- Data language for which the files are to be spooled out
12. Format=ASCII  
- Format, in which the files are spooled out (ASCII, UTF8 or UCS2)

## 6 File Description

All the files that the ASRA Data Spooler can generate are complete files. It is not possible to generate supplement files.

Each of the files (except the file “80 flat rate”) has a header and a footer. The footers are of the same layout in all the files, however the headers in the files differ. Furthermore, the headers within a file type can differ depending on whether the file is an domestic or foreign file. However, the headers in all the export files are the same.

Section 6.1 provides an overview of all the files and the standard file names that are assigned to them for each language.

The sections 6.2 to 6.6 describe the headers and footers, as well as the data formats for the individual file types.

### 6.1 File Overview

Table 6.1 on the next page shows an overview of all the files and their standard names in the various languages.

Language	Language code in ASRA	Master data complete RL 326	Tables complete RL 84	Model designation complete RL 140	Model designation complete RL 80	WUnit complete RL 80
German Domestic	<b>00</b>	VZ002A	VZ004A	VZ008A	VZ046A	VZ000A
German Foreign	<b>01</b>	VZ042A	VZ044A	VZ008A	VZ046A	VZ040A
English	<b>02</b>	VZ082A	VZ084A	VZ008A	VZ086A	VZ080A
French	<b>03</b>	VZ122A	VZ124A	VZ008A	VZ126A	VZ120A
Spanish	<b>04</b>	VZ162A	VZ164A	VZ008A	VZ166A	VZ160A
Portuguese	<b>05</b>	VZ402A	VZ404A	VZ008A	VZ406A	VZ400A
Italian	<b>06</b>	VZ202A	VZ204A	VZ008A	VZ206A	VZ200A
Dutch	<b>07</b>	VZ482A	VZ484A	VZ008A	VZ486A	VZ480A
Danish	<b>08</b>	VZ322A	VZ324A	VZ008A	VZ326A	VZ320A
Swedish	<b>09</b>	VZ282A	VZ284A	VZ008A	VZ286A	VZ280A
Finnish	<b>10</b>	VZ362A	VZ364A	VZ008A	VZ366A	VZ360A
Greek	<b>12</b>	326GRI	084GRI	VZ008A	VZ046A	80GAWG
Norwegian	<b>15</b>	VZ242A	VZ244A	VZ008A	VZ246A	VZ240A
Turkish	<b>17</b>	VZ442A	VZ444A	VZ008A	VZ446A	VZ440A
Japanese	<b>20</b>	VZ522A	VZ524A	VZ008A	VZ526A	VZ520A
Russian	<b>22</b>	326RUS	084RUS	VZ008A	VZ046A	80GAWR
Czech	<b>24</b>	326CZE	084CZE	VZ008A	VZ046A	80GAWC
Polish	<b>25</b>	326POL	084POL	VZ008A	VZ046A	80GAWP
Slovenian	<b>81</b>	326SLO	084SLO	VZ008A	VZ046A	80GAWS
Croatian	<b>82</b>	326KRO	084KRO	VZ008A	VZ046A	80GAWK
Korean	<b>86</b>	326KOR	084KOR	VZ008A	VZ046A	80GKOR

**Table 6.1: File Overview**



## 6.2 The “326 master data” File

Each line in the “326 master data” file comprises 326 characters.

The “326 master data” file is divided into 4 record types, specifically:

- Record type 10 (Job texts)
- Record type 20 (Included texts)
- Record type 30 (Work units)
- Record type 31 (Notes/Additional operations)

### 6.2.1 The Header in the “326 master data” File for the “domestic” Region

Field No.	Field name	Length	Item	Explanations
01	Record identifier	2	01	Hex 00 00
02	Filler	2	03	Space
03	Usage date	8	05	YYYYMMDD, in ASRA identical to field 08 (Update service new)
04	Filler	2	13	Space
05	Identifier Immediate update service old	1	15	S or spaces For data forwarding, this field always contains a space; for immediate update service here there is an S
06	Update service old	8	16	YYYYMMDD, in complete file identical to field 08; in supplement file: date of the version used for the comparison for the preparation of the supplement
07	Filler	2	24	Space
08	Update service new	8	26	YYYYMMDD, date of the current version
09	Filler	293	34	Space

*Table 6.2: The Domestic Header for the “326 master data” 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 supplement file, field 03 and field 08 contain the date of the current version and field 06 the date of the version used for the comparison for the preparation of the supplement.

### 6.2.2 The Header in the “326 master data” File for the “Export” Region

Field No.	Field name	Length	Item	Explanations
01	File identifier	2	01	Hex 00 00
02	Date of current Version	8	03	YYYYMMDD
03	Language identifier	2	11	Numeric, 00 to 99
04	Filler	1	13	Space
05	Version month/year	5	14	MM/YY
06	Filler	308	19	Space

Table 6.3: The Export Header for the “326 master data” File

### 6.2.3 The Footer for the “326 master data” File

Field No.	Field name	Length	Item	Explanations
01	File identifier	2	01	Hex FF FF
02	File counter	8	03	Number of records (without start/end records) coded in Hex leading zeros, F as termination
03	Filler	316	11	Space

Table 6.4: The Footer for the “326 master data” File

### 6.2.4 Structure of the Record type 10 (Job texts) in the “326 master data” File

Field No.	Field name	Length	For mat	Item	Explanations	Default Value	Database Fields	Sorting
01 H	File identifier	2	X	01	10= job text	10		
02 H	Car/commercial veh. identifier	2	X	03	00= car, 10= commercial vehicle		VHG_CODE	1
03 H	----	2	X	05	Space	Blank		
04 H	Design group	2	X	07	Numeric, 00 to 99		COG_CODE	2
05 H	Spare	1	X	09	Constant 0	0		
06 H	Operation number	4	X	10	Numeric, 0001 to 9999		OPR_OPERATION_CODE	3
07 H	Spare	1	X	14	Constant 0	0		
08 H	Administration type	1	X	15	1= new, 2=change, 3= deletion			
09 H	Category	1	X	16	G= stand-alone operation, spaces = linked operation		OPR_CATEGORY	
10	Operation text	180	X	17	6 lines of 30 characters (min. 1 line not Space		IDT_TEXT + ACT_TEXT + if VTT_Text is not empty, (VTT_TEXT) is written, (brackets are written around the text) + VPT_TEXT	
11	Invoice text (is no longer written)	90	X	197	3 lines of 30 characters, spaces or Uneven spaces		IDT_TEXT + ACT_TEXT; text is not written if this is the same as the job text or it does not fit in the structure of 3 lines of 30 characters.	
12	Filler	40	X	287	Space	Blank		

Table 6.5: Structure of the record type 10 (Job texts) in the “326 master data” File

### 6.2.5 Structure of the Record type 20 (Included texts) in the “326 master data” File

Field No.	Field name	Length	Format	Item	Explanations	Default Value	Database Fields	Sorting
01	Record identifier	2	X	01	20= comprehensive text	20		
02	Car/commercial vehicle identifier	2	X	03	00= car, 10= commercial vehicle		VHG_CODE	1
03	Family group	2	X	05	Numeric, 00 to 99		FAM_CODE	2
04	Design group	2	X	07	Numeric, 00 to 99		COG_CODE	3
05	Spare	1	X	09	Constant 0	0		
06	Operation number	4	X	10	Numeric, 0001 to 9999		OPR_OPERATION_CODE	4
07	Spare	1	X	14	Constant 0	0		
08	Administration type	1	X	15	1= new, 2=change, 3= deletion	1		
09	Text sequence identifier	2	X	16	Numeric, 01 to 24.99 99= no following record; 01= first following text record, 02= second, etc.	99		
10	Text area	280	X	18	4 text lines of 70 characters		PAT_TEXT	
11	Filler	29	X	298	Space	Blank		

Table 6.6: Structure of the Record type 20 (Included texts) in the “326 master data” File

### 6.2.6 Structure of the Record type 30 (Work units) in the “326 master data” File

Field No.	Field name	Length	Format	Item	Explanations	Default Value	Database Fields	Sorting
01	Record identifier	2	X	01	30= work units	30		
02	Car/commercial vehicle identifier	2	X	03	00= car, 10= commercial vehicle		VHG_CODE	1
03	Family group	2	X	05	Numeric, 00 to 99		FAM_CODE	4
04	Design group	2	X	07	Numeric, 00 to 99		COG_CODE	2
05	Spare	1	X	09	Constant 0	0		
06	Operation number	4	X	10	Numeric, 0001 to 9999		OPR_OPERATION_CODE	3
07	Spare	1	X	14	Constant 0	0		
08	Administration type	1	X	15	1= new, 2=change, 3= deletion			
09	Work units	300	X	16	Individual work unit = space or numeric (000 to 999) 100 type identifiers work unit of 3 digits (= individual work unit)	300 Blanks	FRE_FLATRATE, FRS_FLATRATE, FRM_FLATRATE	
10	Note text identifier	1	X	316	X= Note text exists, space = no note text	Blank	If there is an entry for this FamilyOperation in the table JNR_JOBNOTE_REF, an X is written	
11	Additional operations identifier	1	X	317	X= Additional operation exists, space = No additional operations	Blank	If there is an entry for this FamilyOperation in the table AOP_ADD_OPERATION, an X is written	
12	Image number	4	X	318	Space or numeric, 0001 to 9999	4 blanks	Always blank	
13	Oper. no. (job text no.)	4	X	322	Space or numeric, 0001 to 9999	4 blanks	If no included text is present for the family/operation item, 4 blanks are entered. Where an included text does exist, the job number is entered. If an included text is used several times (identical content), it is written only once in record type 20 and the operation item of the first occurrence is stored here. As only the 4-digit job number is given, a summary is only made within the same vehicle category, family and design group! <sup>1</sup>	
14	Spare	1	X	326	Space, if field 13 space, otherwise 0	Blank		

Table 6.7: Structure of the Record type 30 (Work units) in the “326 master data” File

<sup>1</sup> This procedure has been refined compared to earlier versions (as of DataSpooler Version G.05.11). Originally, the summary was compiled using the vehicle category and family. But since only the operation item was stored, referencing was made across all design groups. The exception that allowed different included texts to appear in several design groups with the same operation item was not satisfactorily realized in ASRA ES or its successor systems and was therefore abandoned.

### 6.2.7 Structure of the Record type 31 (Notes/Additional operations)

Field No.	Field name	Length	For mat	Item	Explanations	Default Value	Database Fields	Sort- ing
01	Record identifier	2	X	01	31= information text/additional operations	31		
02	Car/commercial vehicle identifier	2	X	03	00= car, 10= commercial vehicle		VHC_CODE	1
03	Family group	2	X	05	Numeric, 00 to 99		FAM_CODE	4
04	Design group	2	X	07	Numeric, 00 to 99		COG_CODE	2
05	Spare	1	X	09	Constant 0	0		
06	Operation number	4	X	10	Numeric, 0001 to 9999		OPR_OPERATION_CODE	3
07	Spare	1	X	14	Constant 0	0		
08	Administration type	1	X	15	1= new, 2=change, 3= deletion			
09	Note text	40	X	16	2 lines of 20 characters, alphanumeric	2x20 Blanks	If there is an entry for this FamilyOperation in the table JNR_JOBNOTE_REF, JNT_TEXT_STRING	
10	Additional operations	160	X	56	20 additional operation numbers of 8 characters Individual additional operation number: space or numeric structure: design group code length 2, spare length 1 (always 0), operation number length 4, Spare length 1 (always 0)	20x8 Blanks	If there are entries for this FamilyOperation in the table AOP_ADD_OPERATION, then the AOP_ADD_OPR are selected in accordance with COG_CODE and OPERATION_CODE, sorted and - from each AOP_ADD_OPR for the COG_CODE, constant 0, OPR_OPERATION_CODE, constant 0 - written. Additional operations are sorted by design group code and then by operation number	
11	Filler	111	X	216	Space	Blank		

Table 6.8: Structure of the Record type 31 (Notes/Additional operations) in the "326 master data" File

### 6.3 The "84 Table Data" File

Each line in the "84 Table data" file comprises 84 characters.

The " 84 Table data " file is divided into 4 record types, specifically:

- 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)

### 6.3.1 The Header in the “84 Table Data” File for the “Domestic” Region

Field No.	Field name	Length	Item	Explanations
01	Record identifier	2	01	Hex 00 00
02	Filler	2	03	Space
03	Usage date	8	05	YYYYMMDD, in complete file identical to field 07 (Update service new)
04	Filler	2	13	Space
05	Update service old	8	16	YYYYMMDD, in complete file identical to field 07; in supplement file: date of the version used for the comparison for the preparation of the supplement
06	Filler	2	23	Space
07	Update service new	8	25	YYYYMMDD, date of the current version
08	Filler	52	33	Space

Table 6.9: The Domestic Header for the “84 Table Data” File

### 6.3.2 The Header in the “84 Table Data” File for the “Foreign” Region

Field No.	Field name	Length	Item	Explanations
01	Record identifier	2	01	Hex 00 00
02	Date of the current version	8	03	YYYYMMDD
03	Language identifier	2	11	Numeric, 00 to 99
04	Filler	1	13	Space
05	Version month/year	5	14	MM/YY
06	Filler	66	19	Space

Table 6.10: The Export Header for the “84 Table Data” File

### 6.3.3 The Footer for the “84 Table Data” File

Field No.	Field name	Length	Item	Explanations
01	Record identifier	2	01	Hex FF FF
02	Record counter	8	03	Number of records (without start/end records) coded in Hex leading zeros, F as termination
03	Filler	74	11	Space

Table 6.11: The Footer for the “84 Table Data” File

### 6.3.4 Structure of the Record Type 02 (Family group directory)

Field No.	Field name	Length	For mat	Item	Explanations	Default Value	Database Fields	Sort- ing
01	Record identifier	2	X	01	02= Family	02		
02	Car/commercial vehicle identifier	2	X	03	00= car, 10= commercial vehicle		VHG_CODE	1
03	Family	2	X	05	Numeric, 00 to 99		FAM_CODE	2
04	Family name	65	X	07	Alphanumeric	Blank	FAT_TEXT	
05	Filler	5	X	72	Space	5 blanks		
06	Administration type	1	X	77	1= new, 2=change, space = no change			
07	Book	2	X	78	Numeric, 00 to 99 if field 02 = 00 (car) -> Book 02, if field 03 (family) has the value 01 to 19. Book 03, if field 03 (family) has the value 21 to 39. (Family 20 does not occur) If field 02 = 10 (commercial vehicle) -> Book 18, if field 03 (family) has the value 01 to 19. Book 19, if field 03 (family) has the value 21 to 39. (Family 20 does not occur) Book 20, if field 03 (family) has the value 41 to 59. (Family 40 does not occur) Book 37, if field 03 (family) has the value 91. Book 38, if field 03 (family) has the value 92.	2 blanks		
08	Column	2	X	80	Numeric, 00 to 99 Contents: field 03 (family) modulo 20: For example, family 03 yields column 03, Family 23 also yields column 03. <b>Exception:</b> The families 91 and 92 yield the column 01.	2 blanks		
09	Filler	3	X	82	space	3 blanks		

Table 6.12: Structure of the Record Type 02 (Family group directory) of the "84 Table Data" File



### 6.3.5 Structure of the Record Type 03 (Design group directory)

Field No.	Field name	Length	Format	Item	Explanations	Default Value	Database Fields	Sorting
01	Record identifier	2	X	01	03= design group directory	03		
02	Car/commercial vehicle identifier	2	X	03	00= car, 10= commercial vehicle		VHG_CODE	1
03	Design group	2	X	05	Numeric, 00 to 99		COG_CODE	2
04	Spare	1	X	07	Constant 0	0		
05	DG name	30	X	08	Character string	Blanks	CGT_TEXT	
06	Administration type	1	X	38	1= new, 2=change, space = no change			
07	Filler	46	X	39	space	Blank		

Table 6.13: Structure of the Record Type 03 (Design group directory) of the "84 Table Data" File

### 6.3.6 Structure of the Record Type 04 (Design Group notes)

Field No.	Field name	Length	Format	Item	Explanations	Default Value	Database Fields	Sorting
01	Record identifier	2	X	01	04= design group notes	04		
02	Car/commercial vehicle identifier	2	X	03	00= car, 10= commercial vehicle		VHG_CODE	1
03	Family group	2	X	05	Numeric, 00 to 99		FAM_CODE	2
04	Design group	2	X	07	Numeric, 00 to 99		COG_CODE	3
05	Spare	1	X	09	Constant 0, for design group-extension	0		
06	Line number	3	X	10	Numeric, 001 to 200			
07	Note text line	70	X	13	Space or not equal to space		GNT_TEXT_STRING	
08	Identifier closing line	1	X	83	* = last line, space = further line			
09	Administration type	1	X	84	1= new, 2=change, space = no change			

Table 6.14: Structure of the Record Type 04 (Design group notes) of the "84 Table Data" File

### 6.3.7 Structure of the Record Type 05 (Design group table of contents)

Field No.	Field name	Length	Format	Item	Explanations	Default Value	Database Fields	Sorting
01	Record identifier	2	X	01	05= design group table of contents	05		
02	Car/commercial vehicle identifier	2	X	03	00= car, 10= commercial vehicle		VHG_CODE	1
03	Family group	2	X	05	Numeric, 00 to 99		FAM_CODE	2
04	Design group	2	X	07	Numeric, 00 to 99		COG_CODE	3
05	Spare	1	X	09	Constant 0	0		
6a	Operation number	5	X	10	Operation number, spare zero on the end	0	CSG_OPERATION_CODE (4-digit)	4
6b	Design group table of contents text	60	X	15	Uneven spaces	Blank	CST_TEXT	
07	Administration type	1	X	75	1= new, 2=change, space = no change			
08	Filler84"	9	X	76	Space	9 blanks		

Table 6.15: Structure of the Record Type 05 (Design group table of contents) of the "84 Table Data" File

## 6.4 The "140 model designation" File

Each line in the "140 model designation" file comprises 140 characters. The "140 model designation" file only contains the record type 01.

### 6.4.1 The Header in the "140 model designation" File for the "Domestic" Region

Field No.	Field name	Length	Item	Explanations
01	Record identifier	2	01	Hex 00 00
02	Filler	2	03	Space
03	Usage date	8	05	YYYYMMDD, in ASRA identical to field 09 (Update service new)
04	Filler	2	13	Space
05	Update service old	8	15	YYYYMMDD, in complete file identical to field 09; in supplement file: date of the version used for the comparison for the preparation of the supplement
06	Filler	2	23	Space
07	Update service new	8	25	YYYYMMDD, date of the current version
08	Filler	108	33	Space

Table 6.16: The Domestic Header for the "140 model designation" File

#### 6.4.2 The Header in the “140 model designation” File for the “Foreign” Region

Field No.	Field name	Length	Item	Explanations
01	Record identifier	2	01	Hex 00 00
02	Date of the current version	8	03	YYYYMMDD
03	Language identifier	2	11	Numeric, 00 to 99
04	Filler	1	13	Space
05	Version month/year	5	14	MM/YY
06	Filler	122	19	Space

Table 6.17: The Export Header for the “140 model designation” File

#### 6.4.3 The Footer for the “140 model designation” File

Field No.	Field name	Length	Item	Explanations
01	Record identifier	2	01	Hex FF FF
02	Record counter	8	03	Number of records (without start/end records) coded in Hex leading zeros, F as termination
03	Filler	130	11	Space

Table 6.18: The Footer for the “140 model designation” File

#### 6.4.4 Structure of the “140 model designation” File (Record Type 01)

Field No.	Field name	Length	Format	Item	Explanations	Default Value	Database Fields	Sorting
01	Record identifier	2	X	01	01= model type table	01H		
02	Car/commercial vehicle identifier	2	X	03	00= car, 10= commercial vehicle		VHG_CODE	
03	Model designation	6	X	05	Model designation 6-digit, numeric, 0 to 9		MDD_MOD_DESGN_NUMBER	
04	Steering/state of disassembly	1	X	11	Space, 0 to 9, A to Z	Blank	MDD_STEERING	
05	Manufacturer plant	1	X	12	Space, 0 to 9, A to Z	Blank	MDD_PROD_PLACE	
06	Spare	1	X	13	Space	Blank		
07	Production progress number from	6	X	14	Space or numeric	Blank	MDD_PROD_CODE_START	
08	Production progress number up to	6	X	20	Space, if field 07 = space or numeric, if field 07 numeric field 08 is greater than or the same as field 07	Blank	MDD_PROD_CODE_END	
09	Family group	2	X	26	Numeric, 00 to 99		FAM_CODE	
10	Model code	2	X	28	Space or 01 to 99		MDC_CODE	
11	Model	18	X	30	Model designation	Blank	MDD_TYPENAME	
12	Short name	30	X	48	Explanatory information on the model or possible type identifier codes	Blank	MDD_SHORT_DESCR	
13	Tonnage	1	X	78	A to Z	Blank	MDD_TONNAGE	
14	Administration type	1	X	79	1= new, 2= change, 3= deletion			
15	Engine no. from	14	X	80	Space, 0 to 9, A to Z	Blank	MDD_MOTOR_MIN	
16	Engine no. up to	14	X	94	Space, 0 to 9, A to Z	Blank	MDD_MOTOR_MAX	
17	Model year from	6	X	108	YYYYMM or space	Blank	MDD_MODELYEAR_FIRST	
18	Model year up to	6	X	114	YYYYMM or space	Blank	MDD_MODELYEAR_LAST	
19	Engine type	1	X	120	A to Z	Blank	MDD_MOTORTYPE	
20	Closed-loop CAT	1	X	121	Y/N	Blank	MDD_CATALYSATOR	
21	Permissible gross weight	1	X	122	Permissible gross weight =< 3.5 t? Y/N	Blank	MDD_MAX_WEIGHT	
22	Counter	6	9	123	Numeric seq. no for model designation records, filled with leading zeros	Blank	MDD_COUNTER	1
23	Number of axes	1	9	129	0 - 9 or space	Blank	MDD_AXES	
24	Weight	3	X	130	Numeric or space	Blank	MDD_REAL_WEIGHT	
25	Spare	8	X	133	Space	Blank		

Table 6.19: Structure of the “140 model designation” File (Record Type 01)

#### 6.5 The “80 model designation” File

Each line in the “80 model designation” file comprises 80 characters. The file “80 model designation” only contains the record type 01.

**6.5.1 The Header in the “80 model designation” File for the “Domestic” Region**

Field No.	Field name	Length	Item	Explanations
01	Record identifier	2	01	Hex 00 00
02	Filler	2	03	Space
03	Usage date	8	05	YYYYMMDD, in ASRA identical to field 09 (Update service new)
04	Filler	2	13	Space
05	Update service old	8	15	YYYYMMDD, in complete file identical to field 09; in supplement file: date of the version used for the comparison for the preparation of the supplement
06	Filler	2	23	Space
07	Update service new	8	25	YYYYMMDD, date of the current version
08	Filler	48	33	Space

*Table 6.20: The Domestic Header for the “80 model designation” File***6.5.2 The Header in the “80 model designation” File for the “Export” Region**

Field No.	Field name	Length	Item	Explanations
01	Record identifier	2	01	Hex 00 00
02	Date of the current version	8	03	YYYYMMDD
03	Language identifier	2	11	Numeric, 00 to 99
04	Filler	1	13	Space
05	Version month/year	5	14	MM/YY
06	Filler	62	19	Space

*Table 6.21: The Export Header for the “80 model designation” File***6.5.3 The Footer for the “80 model designation” File**

Field No.	Field name	Length	Item	Explanations
01	Record identifier	2	01	Hex FF FF
02	Record counter	8	03	Number of records (without start/end records) coded in Hex leading zeros, F as termination
03	Filler	70	11	Space

*Table 6.22: The Footer for the “80 model designation” File*

### 6.5.4 Structure of the “80 model designation” File (record type 01)

**Note:** The sort sequence for the file “80 model designation” depends on the counter (field 22 in the file “140 model designation”). However the counter is **not written** to this file.

Field No.	Field name	Length	For mat	Item	Explanations	Default Value	Database Fields	Sort- ing
01	Record identifier	2	X	01	01= model type table	01		
02	Car/commercial vehicle identifier	2	X	03	00= car, 10= commercial vehicle		VHG_CODE	
03	Model designation	6	X	05	Model designation 6-digit, numeric, 0 to 9		MDD_MOD_DESGN_NUMBER	
04	Steering/state of disassembly	1	X	11	Space, 0 to 9, A to Z	Blank	MDD_STEERING	
05	Manufacturer plant	1	X	12	Space, 0 to 9, A to Z	Blank	MDD_PROD_PLACE	
06	Spare	1	X	13	Space	Blank		
07	Production progress number from	6	X	14	Space or numeric	Blank	MDD_PROD_CODE_START	
08	Production progress number up to	6	X	20	Space, if field 07 = space or numeric, if field 07 numeric field 08 is greater than or the same as field 07	Blank	MDD_PROD_CODE_END	
09	Family group	2	X	26	Numeric, 00 to 99		FAM_CODE	
10	Model code	2	X	28	Space or 01 to 99	Blank	MDC_CODE	
11	Model	18	X	30	Model designation		MDD_TYPENAME	
12	Short name	30	X	48	Explanatory information on the model type or possible type identifier codes, if field 10 = space		MDD_SHORT_DESCR	
13	Tonnage	1	X	78	A to Z		MDD_TONNAGE	
14	Administration type	1	X	79	1= new, 2= change, space = deletion			
15	Filler	1	X	80	Space, 0 to 9, A to Z	Blank		

Table 6.23: Structure of the “80 model designation” File (Record Type 01)

## 6.6 The “80 flat rate” File

Each line in the “80 flat rate” file comprises 80 characters. Unlike all the other files that can be prepared with the ASRA Data Spooler, the “80 flat rate” file has neither a header nor a footer.

The “80 Flat rate” file is divided into 7 record type, specifically:

- Record types 1 - 6 (Job texts)
- Record type 9 (Work units)

### 6.6.1 Structure of Record Types 1 - 6 (Job texts) in the “80 flat rate” File

Each data record from the “80 flat rate” file is divided into six parts (record types). Each line starts with the key for the data record, followed by a subset code.

Field No.	Field name	Length	Item	Explanations	Default Value	Sort- ing
01	Record type	1	01	1 to 6	1	4
02	Book number (text book)	2	02	00= car 10= commercial vehicle	00	3
03	Design group	2	04	Numeric, 00 to 99	00	1
04	Operation number	4	06	Numeric, 0001 to 9999	0000	2
05	Line from	2	10	Constant 01	01	5
06	Line up to (not used)	2	12	Constant space	Blank	
07	Change identifier	1	14	1= new, 2=change, 3= deletion	1	6
08	Filler	14	15	Space	Blank	
09	Text	30	29	Job text	Blank	
10	Filler	4	59	Space	Blank	
11	Filler	6	63	Space	Blank	
12	Supplement version Month/year	5	69	Domestic: 5 spaces Foreign: MM/YY e.g.: 12/99	Blank	
13	Language key	2	74	Domestic: 2 spaces Foreign: Language key (e.g. 01, 02, etc.)	Blank	
14	Filler	5	76	Space	Blank	

Table 6.24: Structure of Record Types 1 - 6 (Job texts) in the “80 flat rate” File

#### Description of special fields:

#### Field 07, Change Identifier:

1 (new), 2 (change): All record types to be written with the same key have the same change identifier

3 (deletion): On deletion only record type 1 is written with 30 spaces

#### Field 09, Text:

The text from the supplement file (field 10) is subdivided into 6 of 30 characters each. The lines contain the record types 1 – 6.

If field 07 has the change identifier 03 (= deletion), then only record type 1 is written with 30 spaces. Record types 2 - 5 are not written.

### 6.6.2 Structure of Record type 9 (work units) in the “80 flat rate” File

Field No.	Field name	Length	Item	Explanations	Default Value	Sorting
01	Record type	1	01		99	4
02	Book number (times book)	2	02	02, 03, 18, 19, 20, 37, 38	00	3
03	Design group	2	04	Numeric, 00 to 99	00	1
04	Operation number	4	06	Numeric, 0001 to 9999	0001	2
05	Line number	2	10	Line number, numeric, 01 to 99	01	5
06	Change identifier	1	12	1, 2, 3 or 4	1	6
0	Columns/times	50	13	Up to 10 blocks of 5 characters	Blank	
08	Filler	6	63	Space	Blank	
12	Supplement version Month/year	5	69	Domestic: 5 spaces Foreign: MM/YY e.g.: 12/99	Blank	
13	Language key	2	74	Domestic: 2 spaces Foreign: Language key (e.g. 01, 02, etc.)	Blank	
14	Filler	5	76	Space	Blank	

Table 6.25: Structure of Record Type 9 (Work Units) in the “80 flat rate” File

#### Description of special fields:

#### Field 02, Book Number Times Book:

The following values are to be used for cars and commercial vehicles respectively:

#### Cars

02 for families 01 to 19

03 for families 21 to 39 (family 20 is not used)

#### Commercial vehicles

18 for families 01 to 19

19 for families 21 to 39 (family 20 is not used)

20 for families 41 to 59 (family 40 is not used)

37 for family 91

38 for family 92

#### Field 05, Line Number:

For the same design group, operation number and book/time number, the line number is incremented. If field 07 comprises more than 50 characters, then 2 lines are written, however with the same line number.



**Field 06, Change Identifier:**

1 = new; 2 = change; 3 = deletion of individual blocks in field 07; 4 = deletion of the entire record within the same times book. The complete files are written only with the change identifier 1.

**Field 07, Columns/Times:**

Up to 10 blocks of 5 characters.

Block comprises: xyyyy; where:

xx family modulo 20 (exception: The families 91 and 92 yield the columns 01)

yyy WU for domestic, decimal hours for export

In case of fewer than 10 blocks, the field is filled with spaces.

If more than 10 blocks are to be written, then another line is written in which the fields 01 - 06 stay the same (line number is retained!).

**The following rules for the sorting of field 07 are to be noted:**

Each family is written sorted in ascending order with the smallest converted work unit in each case. If there is not a work unit for a family, then the family is not written. The same family is only written once per line. If the same times (after conversion) exist for a family, then the time is only written 1x.