

# Functional Overview

This chapter covers the following topics:

- Overview of the COMPRESS Function
  - Overview of the DECOMPRESS Function
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## Overview of the COMPRESS Function

The COMPRESS function edits and compresses data records that are to be loaded into the database:

**input data → ADACMP COMPRESS → ADALOD LOAD**

Input can be data records from

- a physical sequential dataset (fixed- or variable-length records) supplied by the user; or
- an existing Adabas file (that is, from ADACMP DECOMPRESS or ADAULD UNLOAD).

The logical structure and characteristics of the input data are described with *field definition statements*:

- The FNDEF statement is used to define a field (or group of fields).
- The SUBFN and SUPFN statements are used to define a subfield and a superfield, respectively.
- The COLDE, HYPDE, PHONDE, SUBDE, and SUPDE statements are used to define a collation descriptor, hyperdescriptor, phonetic descriptor, subdescriptor and superdescriptor, respectively.

The field definitions provided are used to create the Adabas field definition table (FDT) for the file. It is also possible to use an existing Adabas FDT instead of providing field definitions (see the FDT parameter description in the *COMPRESS Optional Parameters and Subparameters* section).

If the fields in the input record are to be processed in an order that is different from their position in the input record, and/or if one or more fields are to be skipped, the FORMAT parameter may be used to indicate the order and location of the input fields.

The ADACMP COMPRESS function processes the input data as follows:

- Checks numeric data for validity.
- Removes trailing blanks from alphanumeric fields.
- Removes leading zeros from numeric fields.
- Packs numeric unpacked fields.

Fields defined with the fixed (FI) option are not compressed.

A user exit can be used to further edit the input data.

The output of the ADACMP COMPRESS function that is used as input to the ADALOD utility includes the FDT, compressed records, and on the utility report, the Data Storage space requirement (for the ADALOC DSSIZE parameter) and the temp and sort dataset size estimates (TEMPSIZE and SORTSIZE).

The ADACMP COMPRESS function report also indicates

- the number of records processed;
- the number of records rejected; and
- the compression rate percentage.

A dataset containing rejected records is also produced.

## Overview of the DECOMPRESS Function

The DECOMPRESS function decompresses individual files:

**input data → ADACMP DECOMPRESS → decompressed records**

Input data can be data records from existing Adabas files

- unloaded using the ADAULD (file unload) utility; or
- directly (without separate file unloading).

The INFILE parameter of ADACMP DECOMPRESS is used for Adabas files that are directly decompressed. As part of the decompression process, the target file is unloaded without FDT information, which can save time when decompressing larger files.

The output of the ADACMP DECOMPRESS function includes ISNs if the ISN parameter is specified. The DECOMPRESS output may be used as input to a non-Adabas program or as input to the COMPRESS function, once any desired changes to the data structure or field definitions for the file are completed.