TC 104

INTERNATIONAL STANDARD

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Freight containers — Container equipment data exchange (CEDEX) —

Part 3:
Message types for electronic data interchange

Conteneurs pour le transport de marchandises — Échange de données sur les équipements de conteneurs (CEDEX) —

Partie 3: Types de messages pour l'échange de données informatisées

Reference number
ISO 9897-3:1990(E)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9897-3 was prepared by Technical Committee ISO/TC 104, *Freight containers*.

ISO 9897 consists of the following parts, under the general title *Freight containers — Container equipment data exchange (CEDEX)*:

— *Part 1: General communication codes*

— *Part 2: Telex transmission*

— *Part 3: Message types for electronic data interchange*

Annex A of this part of ISO 9897 is for information only.

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Introduction

This part of ISO 9897 specifies rules of communication for use in electronic data interchange. It is intended for use between business entities in communications relating to commercial container transactions on the basis of standardized message types.

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Freight containers — Container equipment data exchange (CEDEX) —

Part 3:
Message types for electronic data interchange

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1 Scope

This part of ISO 9897 establishes a system for computer-to-computer communication in commercial transactions relating to containers.

It consists of

— a data segment directory for the development of messages;

— a directory of message types for container encoded data exchange required for the presentation of information about freight container operations.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 9897. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 9897 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4217:1990, *Codes for the representation of currencies and funds.*

ISO 6346:1984, *Freight containers — Coding, identification and marking.*

ISO 9735:1988, *Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules.*

ISO 9897-1:1990, *Freight containers — Container equipment data exchange (CEDEX) — Part 1: General communication codes.*

UN/EDIFACT, *Standard Data Segments Directory.*

3 Rules of communication for use in electronic data interchange

3.1 General

This part of ISO 9897 is intended to provide guidance for those parties intending to introduce electronic data interchange into their commercial transmitting container transactions.

The procedures for transmitting container data and related information are given in 3.2 and 3.3.

3.2 Data elements

Codes for various characteristics of containers are given in ISO 9897-1, which also includes CEDEX code assignments for certain operating conditions and factors concerning business transactions. Table 1 is reproduced for reference from ISO 9897-1:1990.

Table 1 — Data elements and code sets

Data elements	Code set; see annex[1)]
Message type	A
Full/empty indicator (container)	B
Structural condition (container)	B
Repair condition (container)	B
Outside coating (container)	B
Inside coating (container)	B
Damage location	C
Damage type	D
Material type	E
Repair type	F
Measure unit specifier	G
Repair size dimension	G
Work scale (standard time factor)	G
Responsibility (for repair action)	H
Party identification and location	J
Component for container	K
Component for chassis	L

1) Of ISO 9897-1:1990.

These data elements are part of data segments developed for message types used in electronic data interchange (see 3.3.2 and 3.3.3).

3.3 CEDEX transmission

3.3.1 General

Messages for electronic data interchange, described in the following clauses, are developed using the appropriate standards.

3.3.2 Segment directory

Data segments are defined in this subclause as the basis for the development of the message structure diagrams described in 3.3.3.1.

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Equivalent data elements are listed for each segment, with the value representation (size) and the status of the segment expressed as follows:

Value representation (size):

a = alphabetic characters

n = numeric characters

an = alpha-numeric characters

EXAMPLE

a3 = three alphabetic characters, fixed length

a..3 = three alphabetic characters, maximum length

Status:

M = mandatory data element

C = conditional data element

The segments are presented in 3.3.2.1 to 3.3.2.18.

3.3.2.1 UNH: Message header (from *UN/EDIFACT Standard Data Segments Directory*)

Function: to head, identify and specify a message.

Reference number	Data element	Status	Size	Description
0062	Message reference number	M	an..14	A sender's unique message reference
S009	Message identifier	M		
0065	Message type identifier	M	an..6	Type of message being transmitted[1]
0052	Message type version number	M	n..3	Version number of message
0054	Message type release number	C	n..3	
0051	Controlling agency, coded	C	an..2	
0057	Association assigned code	C	an..6	
0068	Common access reference	C	an..35	Key to relate all subsequent transfers of data to the same business file
S010	Status of the transfer	C		
0070	Sequence message transfer number	M	n..2	
0073	First/last sequence message transfer indication	C	a1	

1) See annex A of ISO 9897-1:1990.

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3.3.2.2 RFF: References (from *UN/EDIFACT Standard Data Segments Directory*)

Function: to specify identifying numbers associated with a message.

Reference number	Data element	Status	Size	Description
1153	Reference qualifier	M	an..3	For example MCP (see 3.4)
C274	Reference	M	n6	
1154	Reference number	C[1]	an..35	
1156	Line number	C	an..6	Not used in CEDEX
C033	Date/time of reference	C[1]		
2001	Date, coded	C	n6	Message completion date
2002	Time	C	n4	

1) Mandatory in CEDEX.

3.3.2.3 CUX: Currencies (from *UN/EDIFACT Standard Data Segments Directory*)

Function: to specify currencies used in the transaction and relevant details for the rate of exchange.

Reference number	Data element	Status	Size	Description
C180	Reference currency	M		
6345	Currency, coded	M	a3	See ISO 4217
6343	Currency qualifier	C	an..3	
C182	Target currency	C		
6345	Currency, coded	M	a3	
6343	Currency qualifier	C	an..3	
5402	Rate of exchange	C	n..12	
6341	Currency market exchange, coded	C	an..3	Not used in CEDEX
C034	Date/time of rate	C		
2005	Date/time qualifier	C	an..3	
2001	Date, coded	C	n6	
2002	Time	C	n4	
2461	Time zone specifier, coded	C	an3	

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3.3.2.4 LBR: Labour

Function: to indicate the labour rate.

Reference number	Data element	Status	Size	Description
8578	Labour rate	C	n..15	Labour cost per hour

3.3.2.5 **EQF: Equipment details** (from *UN/EDIFACT Standard Data Segments Directory*)

Function: to identify a unit of equipment.

Reference number	Data element	Status	Size	Description
8053	Equipment qualifier	M	an..3	For example CN (container)
C271	Equipment	C[1]		
8114	Transport equipment identification prefix number	C	an..4	Operator identification "Owner code"
8260	Unit load device identification number (includes container identification)	C	an..17	See ISO 6346
C224	Equipment size and type	C		
8155	Transport equipment size and type, coded	C	an..4	
8154	Transport equipment size and type	C	an..35	
8077	Shipper-supplied equipment identification	C		Not used in CEDEX
C272	Equipment weight	C		
6153	Weight qualifier	M	an..3	For example GRE [gross weight (see 3.4)]
6150	Weight	M	n..15	For example KGM (kilogram)
6410	Measure unit specifier	C	an..3	

1) Mandatory in CEDEX for containers.

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3.3.2.6 **NAD: Name and address** (from *UN/EDIFACT Standard Data Segments Directory*)

Function: to specify the name/address and their related function, either by C082 only and/or unstructured by C058 structured by C080 to 3207.

Reference number	Data element	Status	Size	Description
3035	Party qualifier	M	an..3	Identification of party function within a container transaction [for example ER (see 3.4)]
C028	Party identification	C[1]		
3039	Party identification, coded	M	an..17	Party code[2]
1131	Code list identifier	C	an2	
C058	Name and address	C		Not used in CEDEX
3124	Name and address	C	an..35	
3124	Name and address	C	an..35	
3124	Name and address	C	an..35	
3124	Name and address	C	an..35	
3124	Name and address	C	an..35	
C080	Party name	C		
3894	Party name	M	an..35	
3894	Party name	C	an..35	
3894	Party name	C	an..35	
C059	Street	C		
3042	Street and number/P.O Box	M	an..35	
3042	Street and number/P.O Box	C	an..35	
3042	Street and number/P.O Box	C	an..35	
3828	City name	C	an..35	
3831	State or province code	C	an..9	
3833	Postal code	C	an..9	
3835	Country code	C	a2	

1) Mandatory in CEDEX.

2) See annex J of ISO 9897-1:1990.

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3.3.2.7 **CTA: Contact** (from *UN/EDIFACT Standard Data Segments Directory*)

Function: to identify a person or a department to whom communication should be directed and/or a communications number.

Reference number	Data element	Status	Size	Description
3139	Contact function, coded	M	an2	See 3.4
C056	Department or employee identifier	C		
3413	Department or employee, coded	C	an..17	Name of signer
3412	Department or employee	C	an..35	
C076	Communication contacts	C		
3413	Communication number	M	an..25	
3412	Communication channel identifier	C	an..3	
C076	Communication contacts	C		
3413	Communication number	M	an..25	
3412	Communication channel identifier	C	an..3	
C076	Communication contacts	C		Not used in CEDEX
3413	Communication number	M	an..25	
3412	Communication channel identifier	C	an..3	
C076	Communication contacts	C		
3413	Communication number	M	an..25	
3412	Communication channel identifier	C	an..3	
C076	Communication contacts	C		
3413	Communication number	M	an..25	
3412	Communication channel identifier	C	an..3	

3.3.2.8 **LOC: Location** (from *UN/EDIFACT Standard Data Segments Directory*)

Function: to identify a place/location.

Reference number	Data element	Status	Size	Description
3227	Place/location qualifier	M	an..3	Location of actual transaction [for example ATR (see 3.4)]
C087	Location identification	C[1)]		
3225	Place/location, coded	C[1)]	an..25	Name and address in ISO Business Directory
1131	Code list identifier, coded	C	an2	
3224	Place/location, name	C	an..17	Not used in CEDEX
3438	Specification of a sub-location	C	an..17	

1) Mandatory in CEDEX.

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3.3.2.9 ERI: Equipment-related information

Function: to give additional information on the equipment.

Reference number	Data element	Status	Size	Description
8511	Material	C	a2	Main construction material[1]
C560	Manufacturer	C		
3588	Manufacturer, coded	C	an..17	Name and address in ISO Business Directory
1131	Code list identifier, coded	C	an..2	
3589	Manufacturer, name	C	an..35	
C276	Date	C		
2005	Date/time qualifier	C	n6	For example MAN [Manufacturing date of equipment (see 3.4)]
2000	Date	C	n4	
8580	CSC re-examination	C	an4	For example year/month or ACEP

1) See annex E of ISO 9897-1:1990.

3.3.2.10 CUI: Current usage information

Function: to give information about current usage of the equipment.

Reference number	Data element	Status	Size	Description
C559	Transaction location	C		
3227	Location qualifier	M	an..3	For example ONL (see 3.4)
3225	Location, coded	M	an..25	Name and address in ISO Business Directory (=IB) (see 3.4)
1131	Code list identifier, coded	C	an2	
C276	Date			
2005	Date/time qualifier	C	an..3	Identification of previous on-hire date [for example PON (see 3.4)]
2000	Date	C	n6	
8533	Full/empty indicator	C	a1	The equipment cargo is full or empty[1]

1) See annex B of ISO 9897-1:1990.

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3.3.2.11 ECI: Equipment condition information

Function: to give equipment condition information.

Reference number	Data element	Status	Size	Description
8517	Structural	C	a1	Performance of structural parts of the equipment[1)]
8518	Repair condition	C	a1	General condition of completed repairs[1)]
8519	Outside coating	C	a1	Performance of the outside coating of equipment[1)]
8520	Inside coating	C	a1	Performance of the inside coating of the equipment[1)]
8521	Consolidated	C	an10	Consolidated general equipment condition, one-line description for special and limited operator codes

1) See annex B of ISO 9897-1:1990.

3.3.2.12 DAM: Damage location identification

Function: to locate damage for each component of equipment.

Reference number	Data element	Status	Size	Description
1082	Line item number	M	n..6	Damage line number
8522	Damage location	C	an4	Physical location of damage on equipment location convention for 1 200 mm × 1 200 mm (4 ft × 4 ft) modules[1)]
8523	Component, coded	C	a3	Coded name of the component requiring repair/action[2)]
8524	Damage type, coded	C	a3	Type of damage[3)]
8525	Material type, coded	C	a2	Component material[4)]

1) See annex C of ISO 9897-1:1990.
2) See annexes K and L of ISO 9897-1:1990.
3) See annex D of ISO 9897-1:1990.
4) See annex E of ISO 9897-1:1990.

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3.3.2.13 WOR: Work

Function: to indicate details of work to be executed.

Reference number	Data element	Status	Size	Description
8526	Repair method, coded	C	a2	Recommended repair method[1]
C858	Repair size dimension	C		Dimensions of the work: length, length and height or length and width where applicable[2]
6168	Length dimension	C	n..5	
6140	Width dimension	C	n..5	
6008	Height dimension	C	n..5	
6410	Measure unit specifier	C	an..3	
6060	Quantity	C	n..15	Number of same type of damage of same dimension and cost within the same damage location area

1) See annex F of ISO 9897-1:1990.
2) See annex G of ISO 9897-1:1990.

3.3.2.14 COS: Cost

Function: to indicate cost per damage line for each responsibility.

Reference number	Data element	Status	Size	Description
8531	Work scale (standard time factor)	C	n2	Work execution level. Defaults to a value of 10 if not supplied[1]
5533	Man hours	C	n..15	Number of man hours
5534	Material	C	n..15	Material cost or flat rate per damage line (no man hours stated)
3535	Responsibility (for repair action)	C	a1	Code for party responsible for cost[2]

1) See annex G of ISO 9897-1:1990.
2) See annex H of ISO 9897-1:1990.

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3.3.2.15 CTO: Cost totals

Function: to consolidate a total for each responsibility.

Reference number	Data element	Status	Size	Description
3535	Responsibility (for repair action)	C	a1	Code for party responsible for costs[1)]
5536	Labour	C	n..15	The sum of labour costs, i.e. the sum of number of hours multiplied by the labour cost per hour
5537	Material	C	n..15	The sum of material costs
5538	Tax	C	n..15	The sum of all tax where applicable
5539	Handling	C	n..15	The sum of the transport and handling costs
5544	Total invoice amount	C	n..15	The sum of 5536 to 5539

1) See annex H of ISO 9897-1:1990.

3.3.2.16 TAD: Transaction details

Function: to give details of transaction.

Reference number	Data element	Status	Size	Description
C040	Carrier	C		
3127	Carrier, coded	C	an..17	Name and address in ISO Business Directory; not used in CEDEX
1131	Code list identifier, coded	C	an2	
3128	Carrier name	C	an..35	
C825	Transport identification	C		
8213	Transport identifier, coded	C	an..9	
1131	Code list identifier, coded	C	an2	
8212	Transport identification	C	an..17	For example vehicle licence number, railway wagon number, vessel name
8452	Nationality of means of transport	C	an..17	
C228	Transport means	C		
8265	Means of transport, coded	C	an..5	
8264	Means of transport	C	an..35	For example vehicle, railway wagon, vessel

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3.3.2.17 TXT: Text (from *UN/EDIFACT Standard Data Segments Directory*)

Function: to give information as required.

Reference number	Data element	Status	Size	Description
0077	Text reference code	C	an3	Free text
0078	Free form text	M	an..70	

3.3.2.18 UNT: Message trailer (from *UN/EDIFACT Standard Data Segments Directory*)

Function: to end and check the completeness of a message.

Reference number	Data element	Status	Size	Description
0074	Number of segments in a message	M	n..6	Control count including UNH and UNT segments
0062	Message reference number	M	an..14	

3.3.3 Message types

The following message types are defined in this part of ISO 9897:

a) On-hire interchange

Function: message from a company to a container owner taking charge of leasing one or more containers (see 3.3.3.1.1).

b) Off-hire interchange

Function: message indicating the end of the leasing period of a container (see 3.3.3.1.1).

c) Interchange

Function: general message between two partners concerning an interchange of a container (see 3.3.3.1.1).

d) Damage description

Function: message from a company or a container owner to a repair company indicating damage to a container (see 3.3.3.1.2).

e) Work estimate

Function: message indicating the estimated work necessary on a damaged container (see 3.3.3.1.3).

f) Third-party claim

Function: message indicating those companies responsible for parts of costs of a damaged container (see 3.3.3.1.4).

g) Work tender request

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Function: message from a company or a container owner to a repair company asking for a work tender offer for a damaged container (see 3.3.3.1.5).

h) Work order

Function: message from a company or a container owner to a repair company to arrange for container repair work (see 3.3.3.1.6).

i) Work cost invoice

Function: message from a repair company to a container owner or other companies indicating the work and costs of the repair (see 3.3.3.1.7).

3.3.3.1 Message structure diagrams

Key to diagrams in 3.3.3.1.1 to 3.3.3.1.7:

Segment identifier code

Status of the segment within a message; number of segment repeats in a message (maximum possible repetitions)

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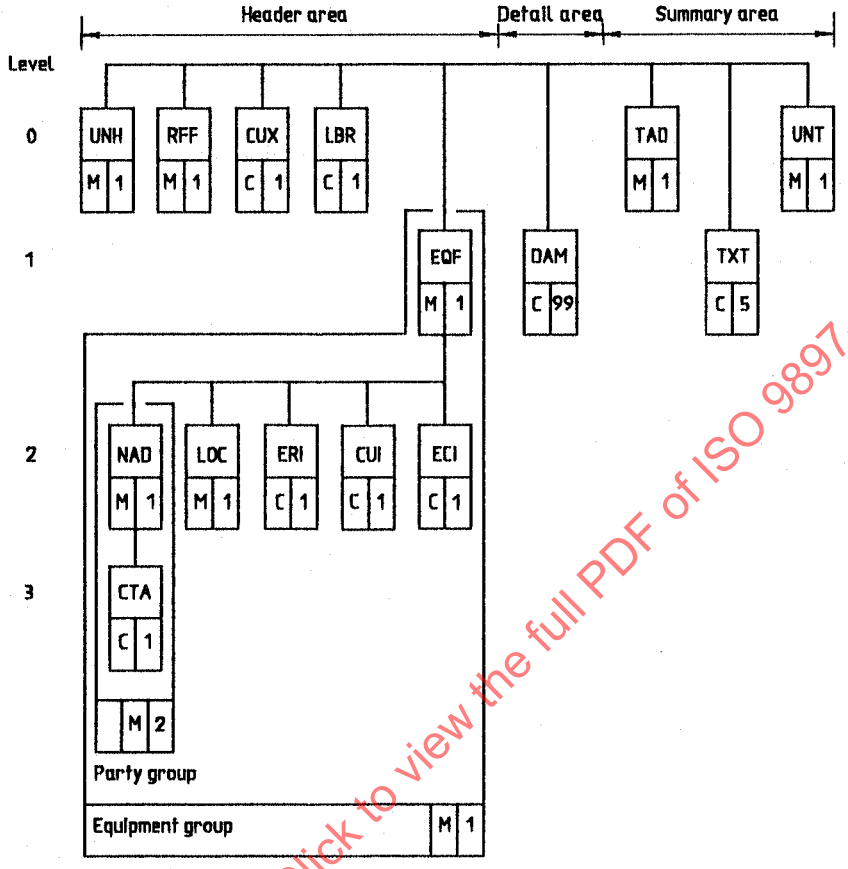
3.3.3.1.1 On-hire interchange/off-hire interchange/interchange

Message type code (see annex A of ISO 9897-1:1990): ONHIRI/OFHIRI/INTERC



Logical sequence of transmitted segments:

UNH	Message header		
RFF	Reference		
CUX	Currencies		
LBR	Labour		
	EQF	Equipment	
		NAD	Name and address
		CTA	Contact
		LOC	Location
		ERI	Equipment-related information
		CUI	Current usage information
		ECI	Equipment condition
	DAM	Damage	
	TAD	Transaction details	
	TXT	Text	
UNT	Message trailer		

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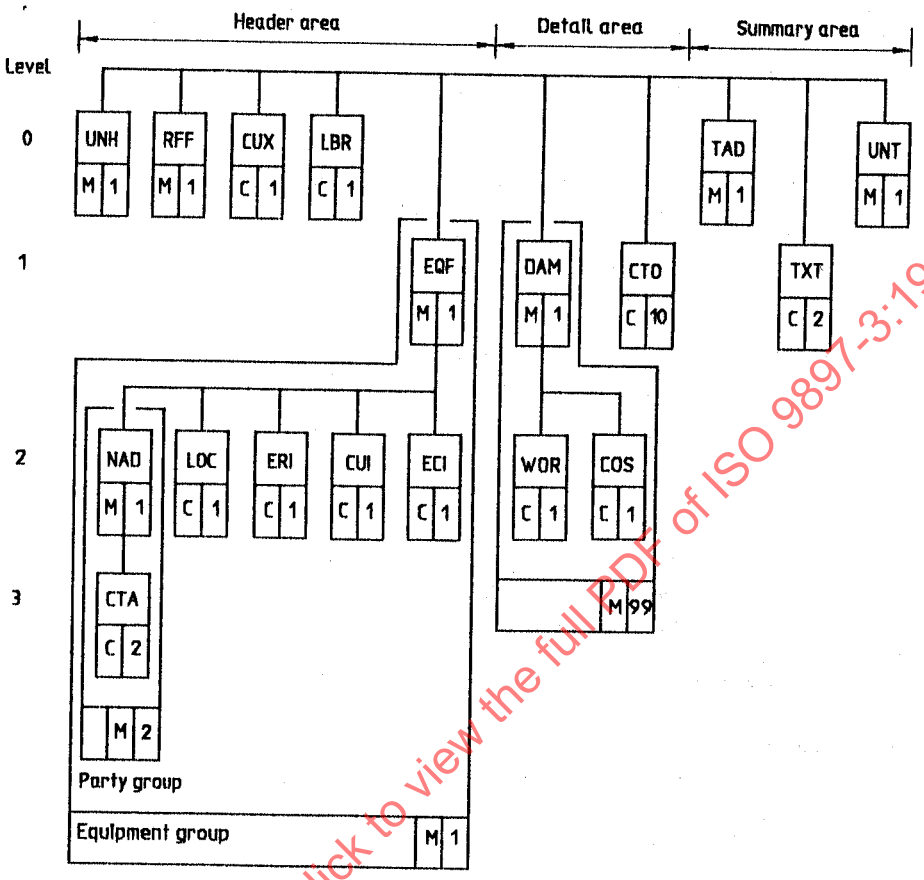
3.3.3.1.2 Damage description

Message type code (see annex A of ISO 9897-1:1990): DDESCR



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Logical sequence of transmitted segments:

UNH	Message header			
RFF	Reference			
CUX	Currencies			
LBR	Labour			
	EQF	Equipment		
		NAD	Name and address	
			CTA	Contact
		LOC	Location	
		ERI	Equipment-related information	
		CUI	Current usage information	
		ECI	Equipment condition	
		DAM	Damage	
			WOR	Work
			COS	Cost
		DAM	Damage (2nd damage)	
			WOR	Work
			COS	Cost
			.	
			.	
			.	
			.	
		DAM	Damage (99th damage)	
			WOR	Work
			COS	Cost
	CTO	Cost totals		
	TAD	Transaction details		
	TXT	Text		
UNT	Message trailer			

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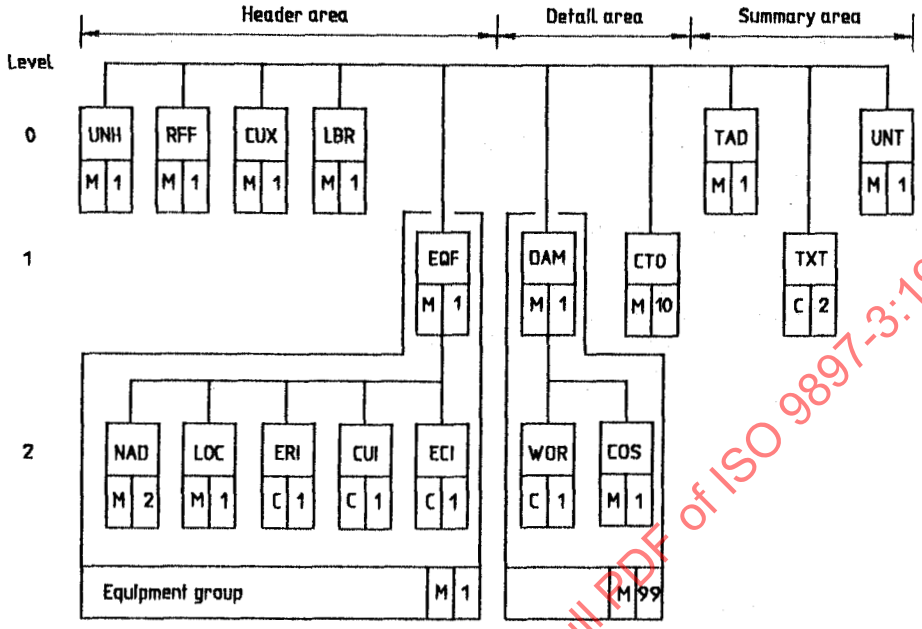
3.3.3.1.3 Work estimate

Message type code (see annex A of ISO 9897-1:1990): WESTIM



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Logical sequence of transmitted segments:

UNH	Message header		
RFF	Reference		
CUX	Currencies		
LBR	Labour		
	EQF	Equipment	
		NAD	Name and address
		LOC	Location
		ERI	Equipment-related information
		CUI	Current usage information
		ECI	Equipment condition
	DAM	Damage (1st damage)	
		WOR	Work
		COS	Cost
	DAM	Damage (2nd damage)	
		WOR	Work
		COS	Cost
		.	
		.	
		.	
		.	
	DAM	Damage (99th damage)	
		WOR	Work
		COS	Cost
	CTO	Cost totals	
	TAD	Transaction details	
	TXT	Free text	
UNT	Message trailer		

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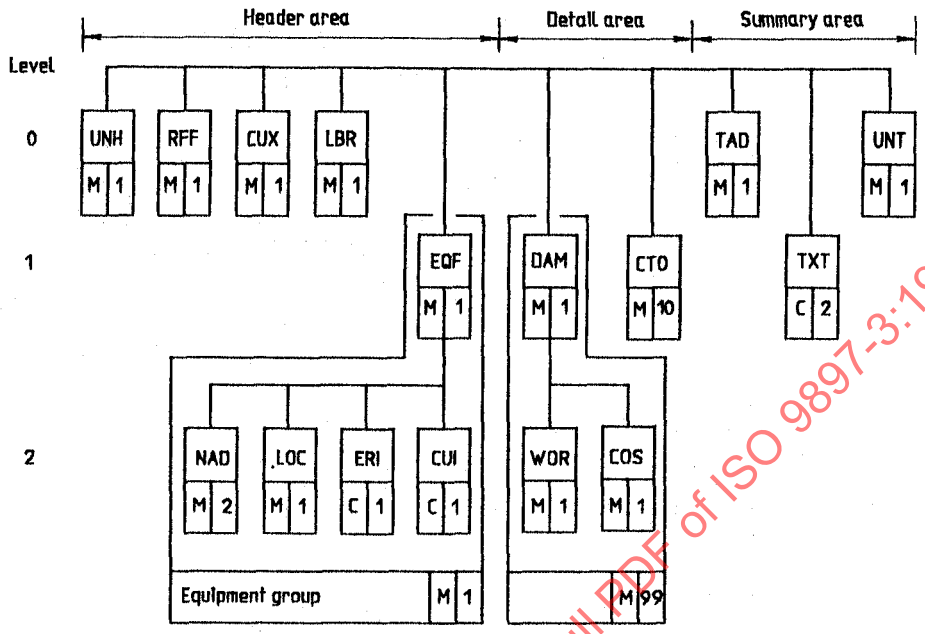
3.3.3.1.4 Third-party claim

Message type code (see annex A of ISO 9897-1:1990): WCLAIM



Logical sequence of transmitted segments:

UNH	Message header		
RFF	Reference		
CUX	Currencies		
LBR	Labour		
	EQF	Container (1st container)	
		NAD	Name and address
		LOC	Location
		ERI	Equipment-related information
		CUI	Current usage information
	DAM	Damage (1st damage)	
		WOR	Work
		COS	Cost
	DAM	Damage (2nd damage)	
		WOR	Work
		COS	Cost
		.	
		.	
		.	
		.	
	DAM	Damage (99th damage)	
		WOR	Work
		COS	Cost
	CTO	Cost totals	
	TAD	Transaction details	
	TXT	Text	
UNT	Message trailer		

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