
Standardisation of M&R Data

COA Repair Working Group Meeting, April 26th, 2007



Content

- Objective of using M&R codes; shipping line perspective
- Standard Repair Jobs Concept
- Comments to current revision of Cedex codes
- Comments to current revision of EDI standards

Objective of using M&R codes; shipping line perspective

- To minimize manual supervision review of estimates by means of automatic checks supported by an IT system.
- Data accuracy for technical evaluation.
- Cost accuracy for vendor control
- To follow worldwide standards codes, to minimize costs of training and implementation



Topics of common interest to be agreed by COA

- **Creation of Cedex Codes Combinations to allow matching standard repair jobs.**

- **Comments to new ISO Cedex Codes drafts related to:**
 - CEDEX for general purpose and refrigerated containers (ISO_9897-1 & ISO_9897-2)
 - CEDEX for EDI between local computer and host computer (ISO_9897-6)

Standard Repair Jobs & Cedex Combinations

- **General Concept to match standard repair JOBS with Cedex codes combinations in order to get standard repair TIMES and MATERIAL COSTS**



- **This is valid for:**

1) STRUCTURAL repairs and MAINTENANCE items

To obtain standard repair TIMES and if possible Material Costs

2a) MACHINERY repairs*

To obtain standard repair TIMES

* Spare Part List are used to obtain Material costs for MACHINERY repairs



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New M&R System / Cedex Codes Combinations / LOG-T / OC

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Combinations for Structural Repairs and Maintenance Items

■ Codes Combination concept:

Container Type

Comp	Loc*	Rep	Mat	Lgth**	Wid**	UOM	From	To
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“from” – “to” fields match estimate information given in fields “Quantity” and/or “length” and/or “width”

ONE
Standard Repair TIME

ONE
Material Cost



Combinations for STRUCTURAL Repairs and Maintenance Items (Example 1)

■ **Examples:**

- Replace a Locking-bar rod

▶ **CONTRACT** requires: component code, repair code, and quantity

Comp	Loc*	Rep	Mat	Lgth**	Wid**	UOM	From	To
LBR		RP				QTY	0	1

Info from ESTIMATE:

Comp	Loc	Damage	Repair	Material	UOM	Length	Width	Qty	Resp
LBR			RP		QTY			1	



Combinations for STRUCTURAL Repairs and Maintenance Items (Example 2)

■ Examples

- Patch in Panel inner or outer cladding in Aluminium or Stainless Steel

▶ CONTRACT requires: component, repair, location, material codes and size

	Comp	Loc*	Rep	Mat	Lgth**	Wid**	UOM	From	To
Panel inner cladding	PIC	T***	PT	AU			SCM	0	200
	PIC	L***	PT	SS			SCM	1000	1200
Panel outer cladding	POC	L***	PT	SS			SCM	1000	1200

Comp	Loc	Damage	Repair	Material	UOM	Length	Width	Qty	Resp
PIC	L***		PT	SS	SCM	35	30		
POC	L***		PT	SS	SCM	40	30		

Info from ESTIMATE:

Combination for STRUCTURAL Repairs and Maintenance Items (Example 3)

■ Examples

- Replace Plain planks which have predefined dimensions

▶ CONTRACT requires: component code, repair code, “description of component dimensions” and quantity

Comp	Loc*	Rep	Mat	Lgth**	Wid**	UOM	From	To
FPB	B***	RP		45	15	QTY	0	1
FPB	B***	RP		45	15	QTY	1	2
FPB	B***	RP		45	15	QTY	2	3

Comp	Loc	Damage	Repair	Material	UOM	Length	Width	Qty	Resp
FPB	B***		RP		QTY	45	15	3	

Info from ESTIMATE:

** Length and width in contract set up are needed for cases in which Legth & width define properties of the component itself. This is specially used when repair type is “section” or “replace”. In this case, and the cost calculation depends on “quantity”. Example: Floorboard (FPB), section leng 60cm x width 15cm, replace 3 units.



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Combination for STRUCTURAL Repairs and Maintenance (key location)

■ Key location concept

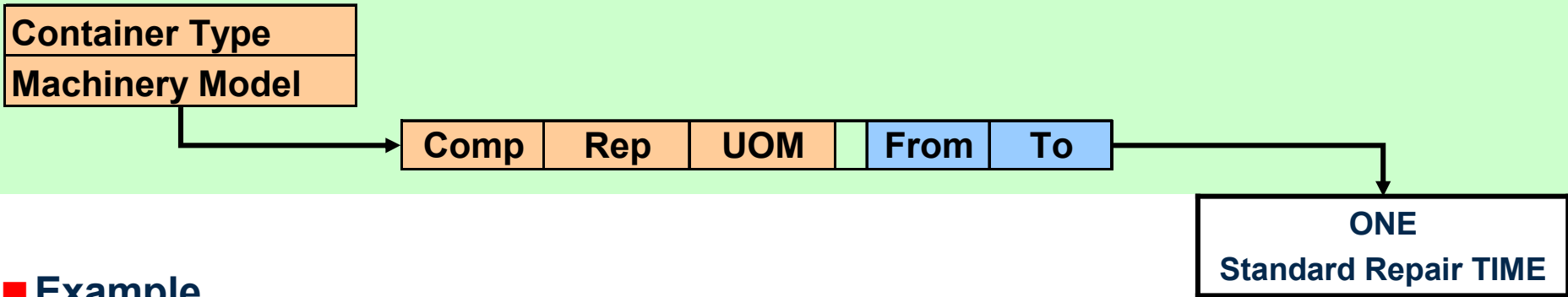
- Key Location associates all locations for one component, which produces the same std repair hours e.g. L(links) = R(right)

Component	Comp Code	Key Loc	Loc	Loc	Loc	Loc	Loc	Loc	Loc	Loc
Corner Post Assembly	CPA	D***	DX1N	DX4N	DB1N	DB4N	DT1N	DT4N		
Corner Post Assembly	CPA	F***	FX1N	FX4N	FB1N	FB4N	FT1N	FT4N		
Corner Post Gusset	CPG	*G**	DG1N	DG4N	FG1N	FG4N				
Panel Assembly	PAA	T***	TXXX	TX1N	TX2N	TX3N	TX4N	TX5N	TX6N	TX7N
Panel Assembly	PAA	D***	DX2N	DX3N	DX23	DB2N	DB3N	DB23	DT2N	DT3N
Rail - Assembly	RLA	*G**	DG2N	DG3N	DG23	FG2N	FG3N	FG23		
Rail - Assembly	RLA	*H**	DH2N	DH3N	DH23	FH2N	FH3N	FH23		

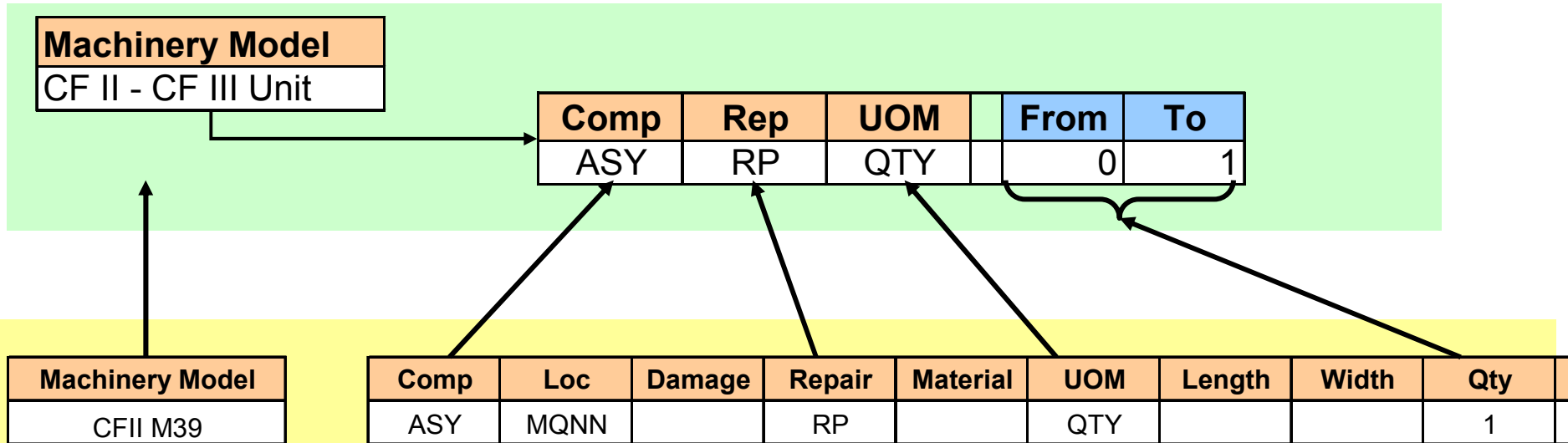
- Differences for key locations depending on the repair type are not included, yet.

Combinations for MACHINERY repairs – Labour Tariff

■ Concept for Machinery Repairs:



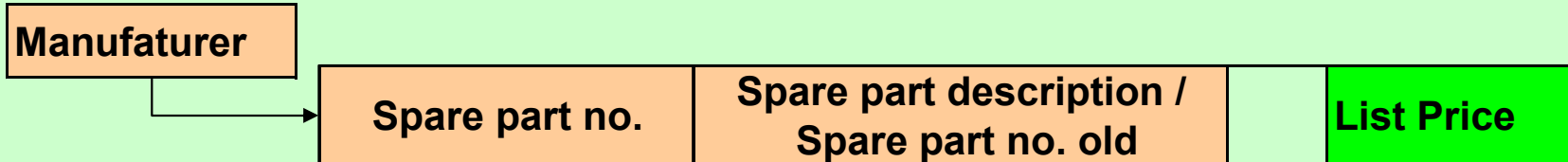
■ Example



Info from ESTIMATE:

Machinery repairs – Spare Part Price = Material Cost

■ Concept for Machinery Repairs – Spare Parts:



■ Example

	Manuf.	Part number	Part description	List price
2	TK	K21-50490-08	55-8882	,00
25558	TK	55-8882	55-9541	,00
25710	TK	55-9541	K215049008 WASHER INSULAT	2,55

Red arrows indicate the following relationships: from '2' to 'TK', from 'TK' to 'K21-50490-08', from 'K21-50490-08' to '55-8882', from '55-8882' to '55-9541', from '55-9541' to 'K215049008 WASHER INSULAT', and from 'K215049008 WASHER INSULAT' to '2,55'. A long red arrow also points from the 'K215049008 WASHER INSULAT' cell down to the 'Spare part No.' field in the table below.

Comp	Loc	Dam	Rep	Mat	UOM	Len.	Wid.	Qty	Resp	Spare part No.	Status
										K21-50490-08	N

Info from ESTIMATE item:



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Proposal

- **Establishment of a project team to work in Standard Repair Jobs**
 - The team should include participants from shipping lines, leasing companies, and depots.

- **Agreement to use Standard “Cedex Codes Combinations” to match standard repair JOBS**

- **Once Standard Repair JOBS are agreed, then development of standard repair times can be allocated.**
 - HS is also interested in development of true repair times.

Topics of common interest to be agreed by COA

- **Creation of Cedex Codes Combinations to allow matching standard repair jobs.**

- **Comments to new ISO Cedex Codes drafts related to:**

- CEDEX for general purpose and refrigerated containers (ISO_9897-1 & ISO_9897-2)
- CEDEX for EDI between local computer and host computer (ISO_9897-6)

CEDEX for general purpose and refrigerated containers (1)

■ “First character” in Location Code

- The new draft includes differentiation between external and internal for first character in location code. This cannot be accepted
 - ▶ Current component codes include already codes for internal components, e.g.:
 - “PIC” = Panel inner cladding
 - “POC” = Panel - outer cladding
 - ▶ The they are not needed and will bring along confusion and misuse of codes, e.g.:
 - An insert in a component is exterior or interior?
 - ▶ The complexity in IT systems will be enormous
- Recommendation: To keep current codes for “First character”

Today’s codes

door end (rear)	D
container exterior	E
front end	F
left side	L
right side	R
top/roof	T
under structure	U
refrigeration unit components	M
unspecified component	N
container interior	I
container exterior and interior (whole container)	X

New codes for Interior

door end (rear)	A
front end	N
left side	P
right side	S
bottom floor	B
top/roof (ceiling)	C



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CEDEX for general purpose and refrigerated containers (2)

■ New Component Codes

- The new draft include new component with material description which cannot be accepted. Eg.:
 - “CMB” code for Crossmember Assembly – Aluminium
 - “BRF” code for Bottom Rail Flange - Aluminium
 - ▶ The codes are not needed. The combination of “component” code plus “material” code cover all cases: eg.
 - “CMA” (Crossmember Assembly) + “AU” (Aluminium)
 - ▶ For component codes it is more important to discuss open issues like:
 - use of general codes as “RLA” code for Rails assembly,
 - or use of more details codes as:
 - “RLF” for Rail lower flange and “RUF” for Rail upper flange
 - ▶ For material codes it is more important to discuss open issues like:
 - “AU” is enough to describe Aluminium or it should be more specific.
-
- Recommendation: NOT to mix material information within Components codes. To impulse the use of “material” codes in estimates specially for reefers

CEDEX for any type of equipment

■ New Unit of Measurement Codes UOM

- The following UOM Cedex codes are needed in M&R processes and currently are not codes defined:

Name	Proposed Cedex code	Usage example
Kilogramme	KGR	freon
Litres	LTR	oil
Square Centimetre	SCM	Repair in panels
Square Metre	SMT	Repair in panels
Cubic Metre	CMT	Remove litter
Quantity (measurement for number of units)	QTY	Replacements

- Recommendation: enlarge the UOM codes, including at least the above codes

EDI messages (Comments to draft ISO_9897-6) (1)

■ WESTIM (Main-record per Estimate):

Estimate Field	Example	Comment
Estimate Type	in service, off-hire, emergency repair	missing
Time of estimate	HH/MM	missing
CSC-compliance	Y/N/U	missing
Container current condition	????	missing
Container planned condition	Food-grade	missing
Repair Duration (Estimation)	3 days	missing
Machinery serial number		New
Hourmeter		New
Compressor serial number	???	missing
Controller serial number	???	missing
Modem serial number	???	missing
Main relay board serial number	???	missing

EDI messages (Comments to draft ISO_9897-6) (2)

■ WESTIM (Estimate Item):

Estimate Field	Example	Comment
Part number		NEW
Part Status	new, rebuild	missing

■ Recommendation:

- To include the missing estimate fields into the EDI standards

Summary

- Establishment of a project team to work on agreement to use Standard “Cedex Codes Combinations” to match standard repair JOBS Standard Repair Jobs
- Standard Repair Times based on Standard Repair JOBS
- Do not add more complexity to the Cedex Codes.



Equipment Technology LOG-T
thanks for your attention

