



Compliance Airworthiness Regulations Education



A12 – CHANGES TO THE IATA ULD CODE SYSTEM

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ULD Identification Codes

IATA SS 40/1

ULD CARE

Introduction

Position	1	2	3	4	5	6	7	8	9	10
Example	A	K	E	1	2	3	4	5	Z	Z

Type Code

Serial Number

Owner Code

ULD Category

ULD Base Dimensions

ULD Contour (container)
or compatibility (pallet)

Background

- ULD Identification codes established under IATA Cargo Service Conference Resolution 686
- Now on 3rd version
 - Amended 1 Oct 1984 from

A	Q	6
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 to

A	M	A
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 - Amended 1 Oct 1993 from 4 numerals to 5 for airline serial number
- Weight and Balance Manuals refer to the IATA codes
 - Base size (posn.2) – Boeing
 - Contour (posn.3)- Airbus
- IATA identification codes are derived from NAS3610

Current Issues

- ULD owners wanting to identify sub groups of ULD (example lightweight ULD)
- Proliferation of new categories
 - Fire suppression/containment equipment
 - Temperature controlled equipment
- Proliferation of different contours

BOTTOM LINE

INSUFFICIENT LETTERS TO COVER THESE NEW REQUIREMENTS.

Plan A

- Develop an 11 or 12 digit identification system
 - Significant IT modification requirements
 - 3-4 years minimum for adoption

CARGO IMP

...	Data Element No.	Name	Alternate Name	Description	Format	Example	Reference	Note
		ULD						
-	115	ULD Serial Number		Serial number allocated to each Unit Load Device by its owner	mnnn(n)	1234		The three possible representations of the format shall be mnnn, nnnn or nnnnn
		Sub Element ID		Format	Description			
			115D001	mnnn(n)	ULD Serial Number			
+	513	ULD Rate Class Type		Coded description of a Unit Load Device rate class	n(a)(a)	8		See CTCC Resolutions Manual, Resolution 523.
+	516	ULD Charge Code		Code explaining the nature of a ULD rate/charge	a	A	1.44	
-	801	ULD Owner Code		Code to identify the owner of a Unit Load Device	mm	TW		Actual format is "aa", "an" or "na". Owner can be an airline or leasing company. See IATA ULD Technical Manual.
		Sub Element ID		Format	Description			
			801D001	mm	ULD Owner Code			
-	802	ULD Type		Code identifying a standard Unit Load Device type	amm	ASE		See IATA ULD Technical Manual.
		Sub Element ID		Format	Description			
			802D001	amm	ULD Type			
+	803	ULD Volume Available Code		Code indicating the proportion of the volume in a Unit Load Device which remains unfilled	n	1	1.20	
						ULD PREPARED BY		

The three possible representations of the format shall be
 mnnn
 nnnn
 nnnnn

CBPP has recognized that mnnnn is missing and will add from next edition of CARGO IMP

ULD Regulations

5.2.2 Effective 1 October 1993

For units marked or remarked the IATA Identification Code will consist of nine (9) or ten (10) characters, comprised of the latin alphabetic and arabic numerals, composed of the following elements:

Position	Character Type	Description
1	alphabetic	ULD Category
2	alphabetic	Base Dimensions
3	alphabetic	Contour or Compatibility
4, 5, 6, 7 and 8	(see Note below)	Serial Number
9 and 10	alpha-numeric	Owner/Registrant

Note:

The serial number will consist of four or five numerics. All entities transmitting or receiving electronic messages containing ULD numbers are required to modify their communication systems to handle 5-numeric ULD serial numbers.

This wording is not aligned with CARGO IMP and will need revising in next edition ULD Regulations

Plan B

- Cargo IMP (the IATA data transmission standard used to set up IT systems) allows

1	2	3	4	5	6	7	8	9	10
A	A	A	A/N	N	N	N	N	A/N	A/N

- ULD Regulations (and previous UTM) indicates (but does clearly specify)

1	2	3	4	5	6	7	8	9	10
A	A	A	N	N	N	N	N	A/N	A/N

Opportunity

1	2	3	4	5	6	7	8	9	10
A	A	A	A/N	N	N	N	N	A/N	A/N

- Position 4 can now provide 10 numerical codes plus 24 alphabetic codes (exclude I and O)

Example: Differentiation between ULD design preference

- Airline ZZ wishes to differentiate between AKE's of different tare weight:

Standard:

1	2	3	4	5	6	7	8	9	10
A	K	E	4	4	4	4	4	Z	Z



Lightweight:

1	2	3	4	5	6	7	8	9	10
A	K	E	L	4	4	4	4	Z	Z

Example: Differentiation between ULD Sub-Categories

- Fire Resistant Containers are put into use by various airlines and owners have a need to identify them differently

1	2	3	4	5	6	7	8	9	10
A	M	J	1	1	0	0	1	Z	Z



1	2	3	4	5	6	7	8	9	10
A	M	A	F	1	0	0	1	Z	Z


Or create a new category for Fire Resistant Equipment in Position

1

Example: Differentiation between ULD Sub-Categories

- Temperature Controlled units

1	2	3	4	5	6	7	8	9	10
R	K	N	1	1	0	0	1	Z	Z



1	2	3	4	5	6	7	8	9	10
R	K	N	A	1	0	0	1	Z	Z

Position 4 letter signifies Active ULD

Example: Differentiation between ULD contour/base size

- Requirement for new contour
 - Combination contours
 - Special position contours
 - Other

1	2	3	4	5	6	7	8	9	10
A	M	J	S	1	0	0	1	Z	Z

- Requirement for new base size
 - Currently covered by X, Y and Z
 - Could these also be covered by a position 4 letter?
 - Ex. 196" by 125" engine pallet

Decisions

- Can this solution work ?
 - Any show stoppers?
 - Does it fix the problem for foreseeable future?
 - Is there a better solution?

Note: in using position 4 as a letter the maximum number range for that particular type of ULD becomes 9999 units, however the use of position 4 is primarily to define more specialist units that are unlikely to exist in large numbers.

More Decisions

- Should completely uncontrolled use of the 24 letters be permitted, just as with the numbers, e.g. 100% airline controlled.

OR

- Have all the letters controlled by ULD Panel

OR

- Middle course, allows some airline independence -say M to Z- while defining certain new “sub categories” having industry wide significance (e.g. Active ULD, Fire Resistant ULD) covered by A-N

Pro's and Con's

Airline/owner controlled	Mix	IATA ULD Panel controlled
Confusing for industry, no common point of reference	Important (function impacting) categories defined while retaining owner independence	As defined as current application but may lack sufficient flexibility
Different owners using different letters for same meaning	Retain some control while allow some flexibility	Standardization of major sub categories
No administration involvement for ULD Panel/ IATA	Medium administration impact	Time consuming administration involvement by ULD Panel/ IATA

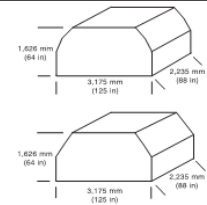
More decisions

- Establish method for airline to register 4th position codes in ULD Regulations?

For	Against
Imposes standardization and control	Extra administration
Information distribution	
Fits with the ULD R “one source of all information on ULD” approach	

STANDARD CONTOUR "K"
REGISTERABLE UNITS (current codes)
AAK, DAK, LAK, MAK, RAK

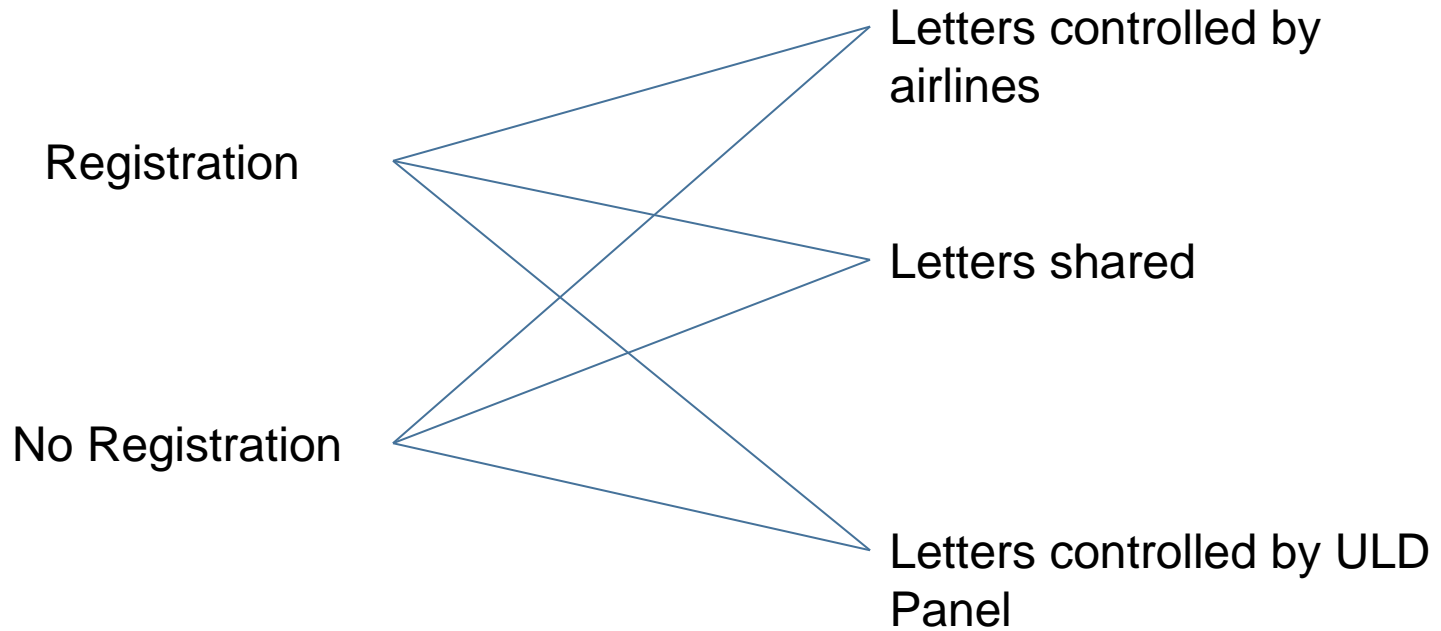
Characteristics	External Volume	Internal Volume	Aircraft & Deck
Maximum Gross Weight 5,000 kgs 11,000 lbs	10.7 m ³ 383 SF	8.8 m ³ 310 SF	Wide Body — Lower Deck & Narrow Body — Main Deck



REGISTERED UNITS (current codes)

ULD Type Code	Manufacturer	Part Number	Owner Code
AAK	BAE	7223	RU
	BOEING	7480	AC, AF, AZ, LH, MS, NZ, RB, SD, TH, WT
	TRAVEL	9007	AT
	TRAVEL	338-923-1	EX
	ARC	338-923-8	EX
	ARC	338-923-9	EX
LAK			
MAK			
RAK	BAE	2718	HE
	BAE	0007	IB
	TRAVEL	2719	HE
DAK	TRAVEL	0283	RU

Decision Matrix

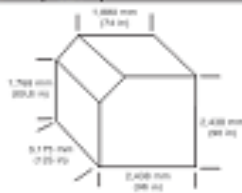


Example- AMJ with non standard IATA contour (reduced height and different angle)

IATA ULD Technical Manual

STANDARD CONTOUR ULD
REGISTERABLE UNITS (current codes)

Classification	Maximum Gross Weight	External Volume	Internal Volume	Aircraft & Deck
AMJ, HRU	6,000 kg 13,200 lb	18.11 m ³ 644.97	16.61 m ³ 589.57	Wide Body - Main Deck



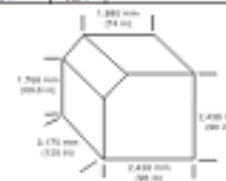
REGISTERED UNITS (current codes)

ULD Type Code	Manufacturer	Part Number	Owner Code
AMJ	BOEING	7301	01
HRU	BOEING	7302	02
HRU	BOEING	7303	03

IATA ULD Technical Manual

STANDARD CONTOUR ULD
REGISTERABLE UNITS (current codes)

Classification	Maximum Gross Weight	External Volume	Internal Volume	Aircraft & Deck
AMJ, HRU	6,000 kg 13,200 lb	18.11 m ³ 644.97	16.61 m ³ 589.57	Wide Body - Main Deck



Airline variation registrations:

4 th position code	Description	Operational Impact
S	Lowered roof contour	For use in Fedex aircraft only. In case of interline use refer to (URL)

Conclusion

- Decision # 1
 - Can the use of letters in position 4 provide a long term (10 + years) solution ?
 - If “Yes” then
 - How controlled should the use of position 4 letters be?
 - Should variations be published in ULD R’s ?

Possible usages of letter codes

- Airline defined
 - Lightweight variations
 - Security doors
 - Non standard contours
 - Etc
- IATA ULD Panel defined
 - Temp controlled units
 - Fire units
 - Common variations
 - GOH
 - Shelves
 - Metal door
 - Double base
 - etc

Thank You

