IATA Standards Compliance – Shipper Built ULD (SBU)

(Version 0.1)

IATA Cargo Handling Council (ICHC)

Executive Summary

The handling and especially the build-up of Unit Load Device (ULD) are critical aspects of air cargo operations as they directly impact flight safety, operational efficiency, and overall supply chain performance. Stakeholders along the air cargo supply chain play a pivotal role in maintaining safe and efficient transportation. However, lack of compliance with IATA Standards and proper training for ULD handling build-up remains significant.

This position paper is intended for industry stakeholders, including shippers, freight forwarders, airlines, and ground handling agents (GHAs). It focuses on the necessity to comply with training requirements and compliance with IATA Standards for the handling and build-up of ULD and, especially, a Shipper Built ULD (SBU). An SBU is a ULD built and prepared by shippers or their agents (such as freight forwarders) rather than by the airlines or their agents. An SBU is typically used to optimize cargo capacity and reduce costs by allowing shippers to pack and build up their goods in a way that is tailored to their specific needs. This paper proposes consistently using "SBU" as the one-and-only term for a shipper built ULD for standardization purposes.

A survey conducted in 2023 among IATA Cargo Handling Council (ICHC) members revealed that the monthly rejection rates for SBU at the carrier domain vary between 2% and over 20% in different regions worldwide. Moreover, according to the data provided by ICHC members regarding SBU performance in June 2023, 33% of the SBU cases reported were related to human errors and non-adherence to standards.

The Need for Compliance

- **Safety First:** Compliance with IATA guidelines support safe handling, reduces risks, and prevents accidents during SBU transportation.
- **Efficiency:** Properly built SBU optimizes cargo capacity, reduces costs and enhances overall operational efficiency.
- **Industry Alignment:** Adherence to standards is aligned with the Industry Master Operating Plan (MOP) and promotes consistent practices across the industry.

Addressing Compliance Challenges

- **Training Programs:** Implement comprehensive initial and recurrent training programs for all personnel involved in SBU build-up and handling.
- **Standards Implementation:** Strictly follow the IATA Cargo Handling Manual (ICHM) for all aspects of cargo handling (incl. SBU).
- **Safety and Security Measures:** Incorporate necessary precautions and security measures to ensure the integrity of the cargo in SBU is never compromised. Ensure safety requirements are met, following existing IATA Standards (e.g., serviceability checks and ULD close-out procedures).

Way Forward

Compliance with IATA Standards is not just a way to ensure regulatory compliance; it is a commitment to safety, efficiency, and industry excellence. By prioritizing compliance and investing in training, stakeholders can create a safer and more reliable air cargo ecosystem. Furthermore, consistent compliance will enhance the industry's reputation and foster trust among stakeholders.

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Airlines:

- Matthias Preiss, Regional Manager Operations (Emirates)
- Jussi Mattila, Manager Global Ground Handling (Cargolux)
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- Veronique Darche, Manager – Cargo ground handling Performance (Air Canada)
- Rani Joseph George, Senior Manager Customs & Authorities (Lufthansa Cargo AG)
- Wui Lian Seow, Senior Manager Cargo Ops Development & Projects (Singapore Airlines)

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- Bazil Hanekom, Operations Performance Manager (dnata)
- Engin Sabahtinov, Strategic Planning & Commercial Development Manager (Celebi)
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- Alessandro Rivolta, Corporate Digital Cargo Manager (Alha)

ICHC Secretary:

- Matthew Tang, Senior Manager E-commerce & Cargo Operations (IATA)

The collaborative efforts of ICHC members and the proactive adoption of IATA standards by airlines and GHAs around the globe demonstrate a shared commitment to excellence in the air cargo industry. Together, we ensure the safe and efficient movement of Shipper Built ULD (SBU) across borders.

IATA Standards Compliance Guidance

IATA Cargo Handling Manual and SBU

Together with the IATA Unit Load Device Board (ULDB), the IATA Cargo Handling Council (ICHC), airlines promote the standards and procedures concerning the handling of ULD and cargo operations and the worldwide recognition, adoption of, and adherence to those standards and procedures contained in the IATA Cargo Handling Manual (ICHM), the purpose of which is to ensure:

- Cargo Operations are safely, efficiently, and consistently accomplished.
- Consignments are ready for carriage, in compliance with the operator and IATA's standards and procedures reflecting the minimum standards as identified by the aviation industry, as well as the rules of the states of origin, transshipment and destination as applicable.
- Alignment with the industry Master Operating Plan (MOP), ensuring operational procedures are aligned to the agreed business process.
- Successful application of the regulations and working instructions with properly planned and maintained initial and recurrent training programs for all persons concerned.

The ICHM provides comprehensive standards and best practices for air cargo stakeholders, including shippers, freight forwarders, airlines, and respective ground handling agents (GHAs) involved in cargo handling, covering the entire shipping process from door to door. One of the key aspects of cargo handling is the use of the Unit Load Device (ULD), which is a device for grouping, transferring and restraining cargo. A ULD may consist of a pallet and an approved restraint method or the use of a container, which can be directly restrained onto the aircraft structure by the Cargo Loading System (CLS).

The ICHM provides standards and best practices for the safe and efficient handling of an SBU, including the procedures for acceptance, build-up, and transporting it, as well as the necessary safety precautions and security measures. By following the guidelines and standards outlined in the ICHM, shippers and their agents can ensure that their SBU is built up and prepared in accordance with airline requirements and that it is safe and secure for transportation.

Please note the clarifications below:

- ULD is a singular term, and for the purposes of this paper, a ULD has one common meaning: Unit Load Device.
- GHA refers to Ground Handling Agent, which is an organization representing an airline by contract and acting on its behalf to perform all handling activities.

The issue

Some of the problems observed in the acceptance process in the carrier domain are:

a) The ULD was built by the freight forwarder or the shipper without using or following the correct cargo build-up standards and procedures, causing it not to be ready for carriage.

b) The ULD was built with the incorrect contour for the aircraft.
c) The ULD was damaged and unserviceable yet still utilized for cargo build-up.
d) The freight was not correctly restrained or restrained using damaged/non-certified or expired pallet nets and corner ropes.
e) The ULD was built with freight concealing goods deemed not safe for carriage, including undeclared DG and particularly lithium batteries.
f) The ULD was mix-loaded with types of freight that are handled in different locations or different parts of cargo facilities, causing delays in handling and or/spoilage (e.g., temperature excursions)
g) The ULD was showing weight variation between the physical goods and the declared weight on the Air Waybill (AWB).

Whilst the poor build quality issues are generally captured at acceptance before departure, many of these issues are not known until the unit is onboard the carrier's aircraft or upon offloading/breakdown at the destination. In the event of an SBU, it is the shipper's (or their agent's) responsibility in the supply chain to ensure that any risk related to safety is always mitigated.

ICHM section 8.2.2 clearly outlines the stages the GHA takes to check a ULD that has been delivered to the GHA. Still, there is little that helps the freight forwarder or shipper to ensure basic handling principles of the ULD and how to build freight are applied correctly prior to that ULD being delivered at the GHA premises for carriage.

ICHC Action

The IATA Cargo Handling Council (ICHC) supports the IATA ULD Safety Campaign to raise ULD safety awareness across the industry. ICHC also recognizes the need for a standardized approach to ULD handling that will help remove complexity and improve safety and efficiency.

The discussion related to safety awareness of shippers and freight forwarders on SBU has been included in ICHC meetings since September 2022. As the build-up quality of the SBU triggered safety concerns among airlines and GHAs, ICHC members recommended that IATA assist in conveying the airlines' perspective on this matter. IATA reached out to the freight forwarders' community through the International Federation of Freight Forwarders Association (FIATA) during their headquarters meeting in March 2023.

In addition, to respond to this growing concern the ICHC members agreed to develop and publish a position paper to recommend the following:

- Create awareness and/or provide shippers and freight forwarders with existing standards.
- Ensure training requirements for shippers and freight forwarders are implemented.
- Risk-assess airlines' business partners (shippers and freight forwarders)

The Recommendations

It is the aim of this position paper to recommend that the following criteria are addressed:

1) **ULD serviceability checks, or visually detectable damage checks when applicable** for all ULD by both the Freight Forwarder and the GHA **MUST** be conducted, based on the Operational Damage Limits Notice (ODLN):

   - ULD serviceability checks are performed when the ULD is empty (e.g., prior to cargo build-up, when being transferred).
   - Visually detectable damage checks when cargo build-up has been completed, and some ULD components are blocked or hidden.
   - If damages are observed beyond the damage limits, these ULD **MUST** be identified and removed from service immediately and dealt with according to prescribed segregation and exclusion procedures and communication protocol.

2) **Storage requirements and facilities**:

   - **A SBU MUST** never be stored directly on the ground or placed on the ground for build-up /break-down activity.
   - Multiple level storage of containers **MUST** only be done in specific storage racking and/or with a spreader or sufficient separation materials unless the containers are fitted with roof enforcements.

3) **SBU handling (Fit 4 Purpose criteria**): SBU **MUST** always be moved **with functional locking mechanisms** to prevent movement during transportation:

   - On dollies or authorized equipment options.
   - Forklifts can be used only if the ULD is forkliftable, i.e., fitted with a base with pockets for forklift tines.

4) **Cargo build-up practice,** including restraint and weight spreading practices, **MUST** be performed as per ICHM, IATA ULD Regulations (ULDR) and airline-specific requirements, including but not limited to:

   - Area load/ linear load/ Maximum Gross Weight/ Maximum Allowable Contour limitations compliance (Also see ULDR Appendix I)
   - Using shoring materials that support the cargo adequately.
   - Correct segregation of incompatible products
   - Special Loads such as piercing cargo, crated loads, drums, reels, tall load, vehicles, and aircraft engines (Also see ICHM 9.4.5.2)
   - Overhang pallets including lower deck build-up ULD
   - Appropriate cargo restraint with tie-down straps and aircraft pallet nets.
   - Fire Containment Covers (FCC)
   - Using plastic sheets effectively

5) **SBU Security requirements**:

   - The need to ensure the integrity of the freight is never compromised to secure the supply chain.

6) **Cargo Build-up Training.** The ICHC recommends cargo build-up competency training (CBTA) specifically related to ICHM Training Requirements and ULDR (section 1.6). Thereafter audited on a risk basis via central record analysis and/or findings should be offered in phases or different levels of competence:
    - An easily accessible basic training program / guideline.
    - A modular standard that can be adopted and applied via specific training modules.
    - A top-end certification and further validation program to support full integration of freight forwarder and shipper ULD build-up practices aligned with IATA guidelines.
    - Specific criteria/declaration of compliance.

7) **Service Quality Program to enhance SBU handling procedures** between shippers and freight forwarders and GHA:

    - Enhancement of the process includes not only GHA actions and responsibilities but also a program that allows freight forwarders and shippers to become certified in all aspects of freight build-up and safe ULD handling practices.

With the above criteria formalized and specified to be addressed in the form of guidance material and future training, certification, or validation programs, there is a requirement for the carrier and GHA to share and offer support for all parties in the supply chain to apply these standard industry practices. Therefore, the focus will be on raising awareness, educating, and sharing material on ULD handling/build-up that will aid shippers and freight forwarders in complying with ULD handling practices that are outlined in the ICHM and ULDR.

A more robust and phased training program, such as the IATA Competency-Based Training and Assessment (CBTA), would benefit the industry by transforming challenges into advantages. Validation and certification can be considered for implementation in support of safer ULD handling and ensuring only freight that is 100% ready for carriage in the future. The benefits are not only safety and security but also better efficiency in the supply chain, less damage to pieces, and better collaboration between all parties involved in the carriage of freight in the future.

END.