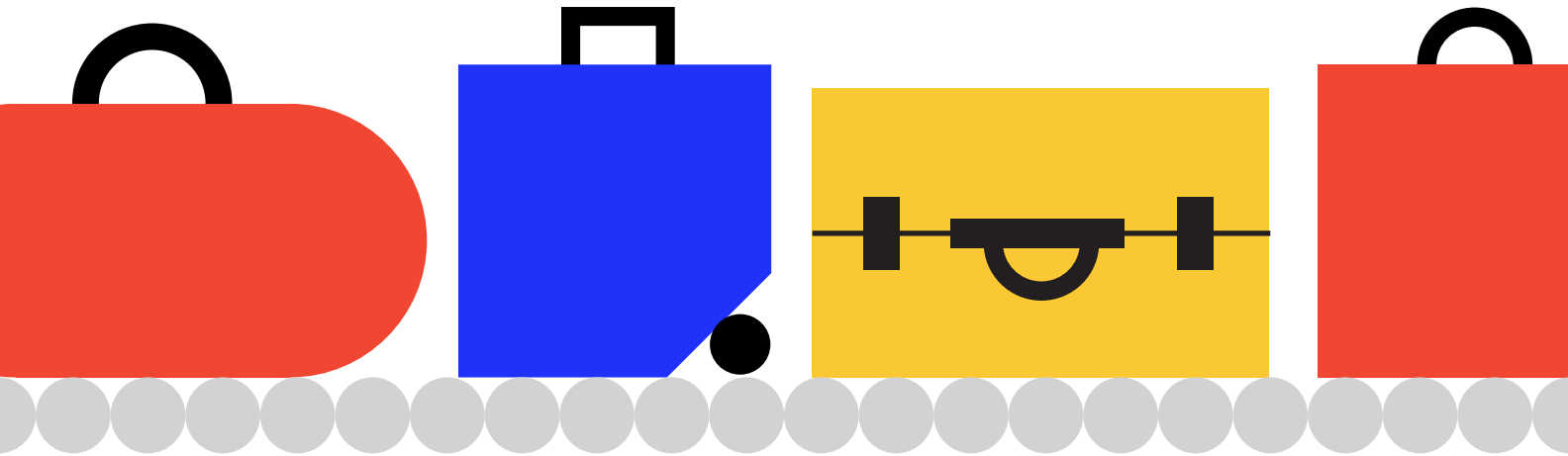
Effective 1 June 2019

Baggage Reference Manual

Edition 4



IATA

NOTICE

DISCLAIMER. The information contained in this publication is subject to constant review in the light of changing government requirements and regulations. No subscriber or other reader should act on the basis of any such information without referring to applicable laws and regulations and/or without taking appropriate professional advice. Although every effort has been made to ensure accuracy, the International Air Transport Association shall not be held responsible for any loss or damage caused by errors, omissions, misprints or misinterpretation of the contents hereof. Furthermore, the International Air Transport Association expressly disclaims any and all liability to any person or entity, whether a purchaser of this publication or not, in respect of anything done or omitted, and the consequences of anything done or omitted, by any such person or entity in reliance on the contents of this publication.

Opinions expressed in advertisements appearing in this publication are the advertiser's opinions and do not necessarily reflect those of IATA. The mention of specific companies or products in advertisement does not imply that they are endorsed or recommended by IATA in preference to others of a similar nature which are not mentioned or advertised.

© International Air Transport Association. All Rights Reserved. No part of this publication may be reproduced, recast, reformatted or transmitted in any form by any means, electronic or mechanical, including photocopying, recording or any information storage and retrieval system, without the prior written permission from:

Senior Vice President
Airport, Passenger, Cargo and Security
International Air Transport Association
800 Place Victoria
P.O. Box 113
Montreal, Quebec
CANADA H4Z 1M1

Baggage Reference Manual, 4th Edition
Material No.: 9383-04
ISBN 978-92-9229-871-5
© 2019 International Air Transport Association. All rights reserved.
Montreal—Geneva

Table of Contents

Preface xi

Part I—The Baggage World 1
1.1 Introduction 1
1.2 Baggage Resolutions and Recommended Practices 1
1.2.1 Baggage-Related Resolutions 1
1.2.2 Baggage-Related Recommended Practices 2
1.3 Airport Operational Structure 3
1.3.1 Overview 3
1.3.2 Baggage Service Level Agreements 6
1.3.3 Description of Different Positions and Roles at Airport Related to Baggage Handling 7
1.3.4 Local Baggage Committee 12
1.4 The Generic Baggage Chain 13
1.4.1 Small Airports 14
1.4.2 Medium-Sized Airports 14
1.4.3 Large Airports 14
1.4.4 What Really Happens to Your Checked Bags 14
1.5 10-Digit License Plate 15
1.5.1 What is a License Plate? 15
1.5.2 Examples of Airline Leading Digits 17
1.6 Baggage Tracking 19
1.6.1 Introduction 19
1.6.2 IATA Resolution 753 on Baggage Tracking–Effective June 2018 20
1.6.3 Baggage Tracking Options 21
1.7 Messaging and Requirements 28
1.7.1 Background 28
1.7.2 General Requirements 29
1.7.3 Specific Requirements 29
1.7.4 Next Generation Baggage Information Messages 31
1.7.5 Baggage Broker 32
1.8 Measuring Quality in the Baggage Area 32
1.8.1 Five Key Areas 33

Part II—The Baggage Journey 35
2.1 Check-in 35
2.1.1 The Purpose 35
2.1.2 Where Can It Happen? 36
2.1.3 Common Issues and their IATA-Recommended Solutions 37
2.1.4 Home-Printed Bag Tags 40
2.1.5 Electronic Baggage Tag 44
2.1.6 HPBT and EBT Evaluations 44

2.2 Security 48
2.2.1 The Purpose 48
2.2.2 Where Can It Happen? 49
2.2.3 Common Issues and their IATA-Recommended Solutions 49
2.2.4 Future Options 50
2.3 Sort 51
2.3.1 The Purpose 51
2.3.2 Where Can It Happen? 51
2.3.3 Future Options 52
2.4 Storage 53
2.4.1 The Purpose 54
2.4.2 Where Can It Happen? 54
2.4.3 Exceptions to the General Process 54
2.5 Build 55
2.5.1 The Purpose 55
2.5.2 Where Can It Happen? 55
2.5.3 Exceptions to the General Process 60
2.5.4 Future Options 61
2.6 Deliver (Departure) 62
2.6.1 Safety First 62
2.6.2 Timing and Security of Deliveries 63
2.6.3 Delivering the Baggage 63
2.6.4 Order of Deliveries 63
2.6.5 Delivery of Gate Bags 63
2.7 Load and Unload 64
2.7.1 The Purpose 65
2.7.2 Where Can It Happen? 65
2.7.3 Future Options 67
2.8 Deliver (Arrivals) 67
2.8.1 The Purpose 68
2.8.2 Where Can It Happen? 68
2.8.3 Information and Analysis 68
2.8.4 Irregularity Codes 68
2.9 Transfer 71
2.9.1 Preplanning 71
2.9.2 Transfer: Post-Operation 74
2.9.3 Exceptions to the General Process 74
2.9.4 Future Options 76
2.10 Arrival and Claim 76
2.10.1 The Purpose 77
2.10.2 Errors 77
2.10.3 Fraud Claims and Theft 78
2.10.4 Baggage Identification Chart 79

2.10.5 Baggage Tracing 79
2.10.6 Baggage Claims 80
2.10.7 Interim Expense 80
2.10.8 Damaged Baggage 81
2.10.9 Replacement Baggage Service 81
2.10.10 Pilfered Baggage and Advice to Passengers on Packaging 81
2.10.11 Delivery of Mishandled Baggage 81
2.10.12 Baggage Conventions 82
2.10.13 Prorating a Claim 85
2.11 Re-Flight and Reroute 87
2.11.1 Definitions 88
2.11.2 Handling of Re-Flight 88
2.11.3 Recording the Reason for Re-Flight 88
2.11.4 Current Issues of Re-Flighting 89

Part III—The Future of Baggage 91
3.1 Short to Medium Term Future–IATA Enhanced Baggage Capabilities Program 91
3.2 RFID and XML 91
3.3 Long Term Future–2050 Baggage Picture 92
3.3.1 General 92
3.3.2 Loose Arrivals 92
3.3.3 Container Arrivals 92
3.3.4 Loading 92
3.3.5 Baggage Facilities 92
3.3.6 Passenger Baggage Drop 93
3.3.7 Customs 93
3.4 Technology Roadmap 93
3.4.1 Barcodes 94
3.4.2 Optical Character Recognition (OCR) 94
3.4.3 Optical Image Recognition 94
3.4.4 Optical Artificial Intelligence 94
3.4.5 Bluetooth 95
3.4.6 Near Field Communication 95
3.4.7 Ultra Wide Band Communication 95
3.4.8 Radio Frequency Identification 95
3.5 The Role of Data in Baggage Operations 99
3.5.1 Traditional Baggage Operations 99
3.5.2 The Paradox of Baggage 99
3.6 The Impact of Data on Baggage Operations 100
3.6.1 Optical Artificial Intelligence 100
3.6.2 Machine Learning for Baggage Probabilities 100
3.6.3 Route Analysis and Profitability 101

Part IV—Most Common Baggage Problems and Solutions 103
4.1 Preface 103
4.2 A Guide to Solutions and their Placement 103
4.2.1 Check-in 103
4.2.2 Security 104
4.2.3 Sort 104
4.2.4 Storage 105
4.2.5 Build 105
4.2.6 Deliver (Departure) 106
4.2.7 Load 106
4.2.8 Unload 106
4.2.9 Deliver (Arrivals) 106
4.2.10 Transfer 107
4.2.11 Arrivals 108
4.2.12 Reflight Reroute 108
4.2.13 General Infrastructure and Resources 108
4.3 Executive Summary 110
4.4 Baggage Handling Problems 110
4.4.1 Read Rate Problems 110
4.4.2 Messaging Problems 111
4.4.3 Baggage Processes 113
4.4.4 Baggage Handling Systems 113
4.5 Solutions 114
S1–Baggage Label Print Quality Monitoring 114
S2–Working with Suppliers to Choose Appropriate Materials for Baggage Labels 115
S3–Improving Baggage Label Quality 115
S4–Visibility and Straightening Labels 116
S5–Baggage-Related Training 116
S6–Reducing Excess Adhesive on Labels 116
S7–Direct Line Monitoring 116
S8–Baggage Message System Monitoring 117
S9–Baggage Message Failure Plan 117
S10–Baggage Message Sequence 117
S11–General Messaging and Discovery Services 118
S12–Setting Baggage Acceptance Times 118
S13–Exception Processing 119
S14–Notification Mechanisms for OOG Baggage 119
S15–Baggage Sortation System Familiarization 119
S16–Transfer Desk Barcode Scanners 121
S17–Ad-hoc Process Monitoring 121
S18–RFID Tracking and Tracing 122
S19–RFID for Sortation in a Traditional Baggage System 124
S20–Notification of Bag Not Taken Away 125

S21–Barcode-Based Automation of Manual Encode....125
S22–RFID in a New Baggage System....125
S23–Using a Baggage Reconciliation System....126
S24–RFID Baggage Reconciliation....126
S25–RFID Baggage Unloading....127
S26–Installation of RFID Track Establishment Points....127
S27–Performing Regular Overnight Cleaning....127
S28–Using Conveyor Markings at Input Points....127
S29–Passenger Communication through the Website....128
S30–Internal Baggage Labeling....129
S31–Using Frequent Flyer Data for No-Tags....130
S32–Introduction of Offline Services for Small Aircraft....130
S33–Recording the Left-Behind Reason at Re-Flight....130
S34–Introduction of Stand Stability....131
S35–Barcode System Performance Monitoring....131
S36–Passenger Reclaim Baggage Checks....131
S37–Driving Competition Across the Route Network....131
S38–Data Driven Approach to Problem Solving....132
S39–Introduction of Matrix Operations....133
S40–Stand Layout....133
S41–Offsite Baggage Acceptance....133
S42–Early Baggage Storage....133
S43–Introduction of Multi-Stage Security Screening....134
S44–Enhancement to S43....134
S45–Introduction of PDA-Style Scanners....135
S46–Pre-Built Storage Area....135
S47–Keeping Ground Handling Equipment Operational....135
S48–Re-Flight System Linked to Schedules for All Users....135
S49–Introduction of a Single Common Re-Flight Area....135
S50–RFID for Next Bag Identification....136
S51–License Plate in the 2D Barcode on the Boarding Pass....136
S52–Having a Team Adjust Labels in the Transfer and Check-in Areas....136
S53–Modifications to the TSA Processes....137
S54–Consolidation of Ground Handling Activities to Reduce Hand-Offs....137
S55–Compression of Build Opening Times to Increase Capacity....137
S56–Airport-Wide Tracking and Reporting....137
S57–Baggage Tracking....137
S58–Compliance with IATA Resolutions and Recommended Practices....138
S59–Implementation of a Baggage Crash Team....138
S60–Manual Reconciliation System....138
S61–Apply 5S in the Baggage Environment....139
S62–Use of a Passenger Label to Identify Baggage Owner....141
S63–Use of a Third Specific Stub from the Baggage Tag Label....141
S64–Identification of Ghost Bags....142

S65–Recording and Display of Baggage Weight....143
S66–Introduction of Baggage Segregation for Flights....143
S67–Passenger Education at Airport Check-in....146
S68–Notification when Baggage Reaches Manual Encode for Smaller Airports....146
S69–Default Belt Baggage Study....147
S70–Implementation of Lateral 'Cut-off' Sensors....147
S71–Clearing Congested Arrival Belts....147
S72–Arrivals Reclaim Passenger Education....147
S73–Ground Handler Inject Point Training....148
S74–Sharing Mishandling Information Among All Staff Involved in the Baggage Chain....148
S75–Prioritization of Baggage Returned to Customs....148
S76–Clear Signage and Strategic Positioning....148
S77–Implement IATA Fast Travel Practices....149
S78–Introducing a Common Bag Drop....149
S79–Reduction of the Baggage Acceptance Limit....149
S80–Introduction of a Baggage Repack and Weighing Area....150
S81–Reassigning Aircraft Gates to Accommodate Quicker Build....150
S82–Introduction of a Baggage Office in the Build/Make-up Area....150
S83–Using White Boards in the Build/Make-up Area....150
S84–Implementing a Baggage Lead Agent/Coordinator for Aircraft Unloading....151
S85–Ensuring Oversized Baggage is Correctly Managed in the Build/Make-up Area....151
S86–Securing Baggage Carts and ULDs for Stand Delivery....151
S87–Manual Encode Best Practices and Baggage Study....151
S88–Maintenance of Baggage Handheld Scanners....152
S89–Introduction of a Default Belt/Chute/Lateral....152
S90–ULD and Baggage Cart Loading....152
S91–Ground Handler Driver Baggage Delivery....152
S92–Securing the Arrival Hall from the General Public....153
S93–Introduction of Friction Strips and Padded Cushioning to Chutes....153
S94–Introduction of Temporary Bag Dispensers at Check-in....153
S95–Build/Make-up Area Close Time Based on Actual Time of Departure....153
S96–Dedicated OOG/Oversize Area for Passenger Reclaim....154
S97–Introduction of Tail-to-Tail Transfer....154
S98–Implement an Automated Baggage Store within the BHS....155
S99–Baggage SLAs (Service Level Agreements)....155
S100–Fast Bag Drop Implementation....156
S101–Forward Messaging for Re-Flight and Reroute Baggage....156
S102–Baggage Performance Analysis....156
S103–Introduction of Transfer Bag Tags....161
S104–Replacing Damaged ULDs....162
S105–Reducing the Volume of Gate-Checked Bags and Improving Check-Point Processing....162

S106–Immigration Fast-Track Processing for Short-Connection Transfer Passengers 164
S107–Standby Passenger Baggage Acceptance 165
S108–Passenger Education of Baggage Transfer Processes 165
S109–Wi-Fi Connectivity 166

Part V—Extracts of Baggage Handling Resolutions and Recommended Practices 167

5.1 Introduction 167
5.2 Extracts of Baggage Related IATA Resolutions 167
5.2.1 Form of Interline Baggage Tag 167
5.2.2 Found and Unclaimed Checked Baggage 176
5.2.3 Forwarding Mishandled Baggage 179
5.2.4 On-hand Baggage Summary Tag 181
5.2.5 Local Baggage Committees 182
5.2.6 Dangerous Goods in Passengers Baggage 187
5.2.7 Acceptance of Firearms and Other Weapons and Small Caliber Ammunition 189
5.2.8 Acceptance of Power Driven Wheelchairs or Other Battery Powered Mobility Aids as Checked Baggage 190
5.2.9 Use of the 10 Digit License Plate 192
5.2.10 Interline Connecting Time Intervals–Passenger and Checked Baggage 193
5.3 Extracts of Baggage Related IATA Recommended Practices 196
5.3.1 Passenger/Baggage Reconciliation Procedures 196
5.3.2 Licence Plate Fallback Sortation Tag 206
5.3.3 Baggage Taken In Error–Notice to Passengers 209
5.3.4 Tracing Unchecked Baggage and Handling Damage to Checked and Unchecked Baggage 211
5.3.5 Baggage Theft, Pilferage and Fraudulent Claim and Prevention 213
5.3.6 Baggage Irregularity Report 217
5.3.7 Airport Operating Rules–Recommended Practice and Procedures 221
5.3.8 Carriage of Carry-on Baggage 223
5.3.9 Handling of Security Removed Items 228

Appendix A—IATA Member Airline and Strategic Partner Case Studies–Baggage Handling Initiatives 229

South African Airways Working with Star Alliance 229
Star Alliance Priority Baggage Monitoring 229
Star Alliance Seamless Hub Connection Center 229
SKY ASSIST: The Benefits of a Simplified Interface 230
Ultra Electronics 231
Working with the Airline Community in South Africa 231
Baggage Segregation 232

Appendix B—Glossary 235

Acronyms/Glossary 235