



PUBLIC

Implementation Guide for Tracking via Tracking Unit and Reference Document in the TM Scenario

SAP Business Network Global Track and Trace

March 2024

THE BEST RUN



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1. ABOUT THIS DOCUMENT

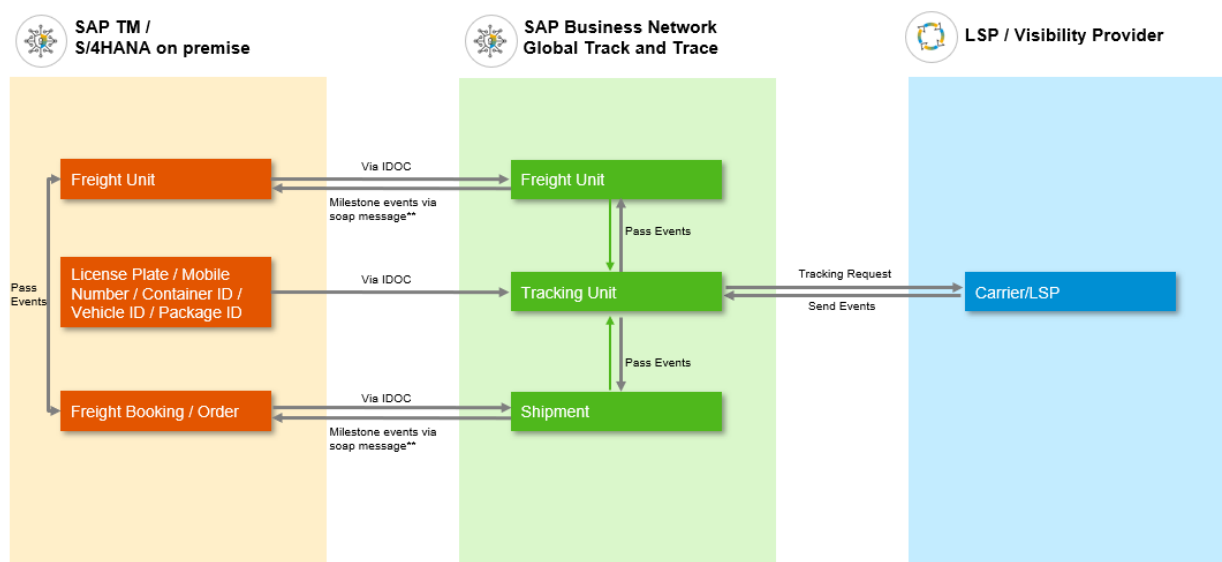
This implementation guide describes how to configure the extractors and maintain freight documents in SAP Transportation Management (SAP TM) for different tracking scenarios. The successful configuration does not indicate that the end-to-end tracking is enabled. To achieve that, you might also need support from visibility providers or logistics service providers.

2. TRACKING VIA TRACKING UNIT

In the TM scenario, you can track the shipments and freight units via tracking unit. The tracking unit is introduced as a standard tracked process in the GTT system, referring to the tracked objects that will be sent to visibility providers or logistics service providers for tracking the shipments and freight units, such as license plate, container ID, external package ID, etc. Both freight unit and freight order/freight booking observe the tracking unit. The process integration flow is as follows:

Tracking Unit

TM scenario - Process integration



**Events propagated from Tracking Unit will not be synchronized back.

Note: Events propagated from the tracking unit cannot be synchronized back to SAP TM.

To support this tracking scenario, you need to configure extractor settings and maintain tracking objects information on freight documents in SAP TM.

Prerequisites

Before you can maintain tracked objects information on freight documents in SAP TM, you must introduce new text types **CONT**, **MOBL** and **EPKG**. To do so, you must perform the following:

- Navigate to the **Text Type** section in **Customizing for Cross-Application Components**, under **Processes and Tools for Enterprise Applications > Reusable Objects and Functions for BOPF Environment > Dependent Object Text Collection > Maintain text Schema**.

- b. Create entries with the **Text Type** and **Description** as follows:

Text Type	Description
CONT	Container ID
MOBL	Mobile Phone
EPKG	External Package ID

- c. Navigate to the **Text Schema** section. Create a new text schema “TORITM” with the description “TOR Item Text Schema”. Select the text schema “TORITM” and double click on 'Assign Text Schema to BO and Node'. Create a new entry as follows:

Business Object Name	BO Node Name
/SCMTMS/TOR	ITEM_TR

- d. Select the **DEFAULT** text schema for **CONT** and **MOBL** text types, and **TORITM** text schema for **EPKG** text type.
- e. Navigate to the **Text Type to Text Schema Assignment** section.
- f. Check if you have assigned the text type **CONT** and **MOBL** to the **DEFAULT** text schema, and **EPKG** to the **TORITM** text schema. If they are not yet assigned, assign them with the following attributes:
Deselect the following checkboxes:
- Mandatory
 - Access Seq
 - Reference
 - Exit Class
 - Internal
 - Lang. Text
- g. Save your entries.

2.1 FTL/LTL Tracking

- Configure Extractor Settings
 - Enter the T-code “ZGTT_TRACK_CONF”.
 - Set “Maintain Tracked Objects on Freight Order/Freight Booking” for relevant freight unit, freight order and freight booking document types.

< **SAP** Display View "GTT Tracking Scenario Configuration Table":

More ▾

GTT Tracking Scenario Configuration Table

Doc. Type	Scenario	
<input type="checkbox"/> YTR1	03 Maintain Tracked Objects on Freight Unit	▾
<input type="checkbox"/> YTU1	03 Maintain Tracked Objects on Freight Unit	▾
<input type="checkbox"/>		

- Maintain Tracked Objects Information on Freight Unit
 - For SAP S/4HANA 1909 SP03 to SAP S/4HANA 2020 FPS01, in the **Notes** tab under the **Items** table, fill in the external package ID of each freight unit's package.

Display GTT Standard FU Type Demo 4100077248

Save Cancel Edit Follow Up Check Direct Shipment Split/Merge Unassign Default Route Remove Unplanned Stages Fixing Cancel Document Customs Display Settings

Items

Items	Item	Item Cate...	Package ID	Product	Gross Volu...	Gross Volu... UoM	Gross Weight	Gross Weight UoM	Qua...	Qua... Unit of Mea...	Packa... Mat. Type	Transp. Unit Resource	Equip... Group	Equipment Type	Item Description
Package	50	Package	1000000010	ZTMPACK01			30 KG		1 EA	Pallet					Pack materials01
Product	30	Product		ZTM_MAT01			10 KG		1 EA						Test material 01
Product	40	Product		ZTM_MAT02			20 KG		2 EA						Test material 02

Package Details Quantities Business Partner Content Identification Discrepancies **Notes**

Insert

Text Type	Language	I...	Content	Created By	Created On Date/Time
External Package ID	English		EXT_1000000010		

- For SAP S/4HANA 2020 FPS01 or onwards, in the **HU Identification 2** field, fill in the external package ID of each freight unit's package, and it will be updated to the **External Package ID** column of the **Items** table.

SAP Detailed Data for Handling Unit 1000021200

Identification	Material	Quantity	Unit
Handling units			
1000021201	ZTMPACK02		
20	DH_TM_MAT2	3	EA
1000021200	ZTMPACK01		
10	DH_TM_MAT1	1	EA

HU Identification: 1000021200 Identification Type: E
 Packaging Materials: ZTMPACK01 Pack materials01
 HU Identification 2: 1000021200_EXT Cust. S: Sort: 0

W/Vol./Dim. Status PackgMatls Addit. Data Conts. History General Info Custom Fields

HU-specific data

System Status: PHEX WHSE
 User status:
 HU storage number: Storage status: Blank
 Current assignment: 0080272338
 HU storage loc.: Handling unit without inventory management
 Contents:

Packaging materials

Packag. matl type: ACJ1 Pallet for WM Pack. Mat. Cat.: C Packaging materials
 Matl grp pkg matl:

SAP Display GTT Standard Freight Unit Acc-Parcel 300009300

Edit Refresh Follow Up Check Direct Shipment Split/Merge Unassign Default Route Remove Unplanned Stages Fixing Cancel Document Display Settings

Items

Standard Change Hierarchy: All Items

Item Hierarchy	Item	Item Type	Product	Package ID	External Package ID	Gross Vol...	Gross Vol... UoM	Gross Wei...	Gross Wei... UoM	Qu...	Qu... UoM
Freight Unit 300009300	1000000									2	EA
Package 30 Pack materials01 1000021200	30		ZTMPACK01	1000021200	1000021200_EXT	2	M3	200	KG	1	EA
Product 10 DH_TM_MAT1	10		DH_TM_MAT1			2	M3	200	KG	1	EA
Package 40 Pack materials02 1000021201	40		ZTMPACK02	1000021201	1000021201_EXT	3	M3	300	KG	1	EA
Product 20 DH_TM_MAT2	20		DH_TM_MAT2			3	M3	300	KG	3	EA

Note:

If multiple packages are assigned to one freight unit, only when all packages are completed, the freight unit is set to “Completed” and then impacts the status of the relevant delivery items.

2.3 Ocean Tracking

There are three options:

Option One: If one freight booking only has one container ID or one freight booking has multiple container IDs and you do not know which freight unit is assigned to which container, do the following:

- Configure Extractor Settings
 - Enter the T-code “ZGTT_TRACK_CONF”.
 - Set “Maintain Tracked Objects Information on Freight Order/Freight Booking” for relevant freight unit, freight order and freight booking document type.

<

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Display View "GTT Tracking Scenario Configuration Table"

More ▾

GTT Tracking Scenario Configuration Table

Doc. Type	Scenario	
<input type="checkbox"/> ZT07	02 Maintain Tracked Objects on Freight Order/Freight Booking	▾
<input type="checkbox"/> ZTU7	02 Maintain Tracked Objects on Freight Order/Freight Booking	▾
<input type="checkbox"/>		
<input type="checkbox"/>		

- Maintain Tracked Objects Information on Freight Booking
 - In the **Content** field of the **Notes** tab, fill in the container ID. If there are multiple container IDs, they need to be separated with the semicolon.

SAP Display Standard Ocean Booking AccAWS-TU2 6500010361														
<a>Edit <a>Refresh <a>Copy <a>Other Copy Options ▾ <a>Schedule ▾ <a>Follow Up ▾ <a>Check ▾ <a>Subcontracting ▾ <a>Create Service Or														
<div> <div>▾ General Data</div> <div>Business Partner</div> <div>Items</div> <div>Document Flow</div> <div>Execution</div> <div><u>Notes</u></div> <div>Attachments</div> <div>Statuses</div> </div>														
<div> <div>Insert</div> <div></div> </div> <table border="1"> <thead> <tr> <th><input checked="" type="checkbox"/></th> <th>Text Type</th> <th>Language</th> <th>I...</th> <th>Content</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td>Container ID</td> <td>English</td> <td><input type="checkbox"/></td> <td>CBHU3202732;EISU9138027</td> </tr> </tbody> </table>					<input checked="" type="checkbox"/>	Text Type	Language	I...	Content	<input checked="" type="checkbox"/>	Container ID	English	<input type="checkbox"/>	CBHU3202732;EISU9138027
<input checked="" type="checkbox"/>	Text Type	Language	I...	Content										
<input checked="" type="checkbox"/>	Container ID	English	<input type="checkbox"/>	CBHU3202732;EISU9138027										

Option Two: If one freight booking has multiple container IDs and you know which freight unit is assigned to which container, do the following:

- Configure Extractor Settings
 - Set "Maintain Tracked Objects on Freight Unit" for relevant freight unit, freight order and freight booking document types.

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SAP

Display View "GTT Tracking Scenario Configuration Table":

More ▾

Doc. Type	Scenario	
<input type="checkbox"/> YTR1	03 Maintain Tracked Objects on Freight Unit	▾
<input type="checkbox"/> YTU1	03 Maintain Tracked Objects on Freight Unit	▾
<input type="checkbox"/>		

SAP Edit SOF Standard Freight Unit Type AccAWS 4100059458

Edit Refresh Follow Up ▾ Check Direct Shipment ▾ Split/Merge Unassign Default Route Remove Unplanned Stages Fixing ▾ Cancel Document Display Settings ⚙ ▾ ? ▾

▾ General Data Business Partner Stages Document Flow Notes Attachments Direct Shipment Options Statuses Administrative Data Execution Customs ...

<input type="button" value="Insert"/> <input type="button" value="Delete"/>				<input type="button" value="Search"/>	<input type="button" value="Filter"/>	<input type="button" value="Settings"/>
<input checked="" type="checkbox"/>	Text Type	Language	L...	Content	Created ...	Created On
<input checked="" type="checkbox"/>	Container ID	English	<input type="checkbox"/>	TEXU3605231	HUEV	07.06.2022 08:33:51 ...

<

SAP

Display View

More

Doc. Type	Scenario	
<input type="checkbox"/> CFU1	04 Maintain Tracked Objects on Container Unit	▼
<input type="checkbox"/> CTO1	04 Maintain Tracked Objects on Container Unit	▼
<input type="checkbox"/> CTU1	04 Maintain Tracked Objects on Container Unit	▼

Edit Refresh Copy Multiple Copies Check Follow Up Unassign Default Route Remove Unplanned Stages Set Status Load/Unload Plan Status (Stop) Execution Status Fixing

General Data Items Stages Notes Statuses Execution Document Flow Attachments

All Items

Standard		Change Hierarchy: All Items		Insert: (Choose Item Type)		Insert			Create	Adjust Subitems			
<input type="checkbox"/>	Item Hierarchy	Item Type	Item Type (Description)	Qu...	Qu... UoM	Gross Wei...	Gross Wei... UoM	Gross Vol...	Gross Vol... UoM	Product	Package ID	Ri	
<input checked="" type="checkbox"/>	123CUIYUW Container 1000000			1	EA	300	KG	3	M3				
<input type="checkbox"/>	GTT Standard Freight Unit AccAWS CU 4100059669			2	EA	300	KG	3	M3				
<input type="checkbox"/>	Product 10 DH_TM_MAT1			1	EA	200	KG	2	M3	DH_TM_MAT1			
<input type="checkbox"/>	Product 20 DH_TM_MAT2			1	EA	100	KG	1	M3	DH_TM_MAT2			

123CUIYUW Container 1000000

Details FWO Data Quantities Notes Business Partner Content Identification Document References Customs Seals Service Orders Discrepancies

General Data

Item Type:

Description:

Container:

Container Number: 123CUIYUW

AD

Capacity

Maximum Payload Weight:

Cubic Capacity:

Length:

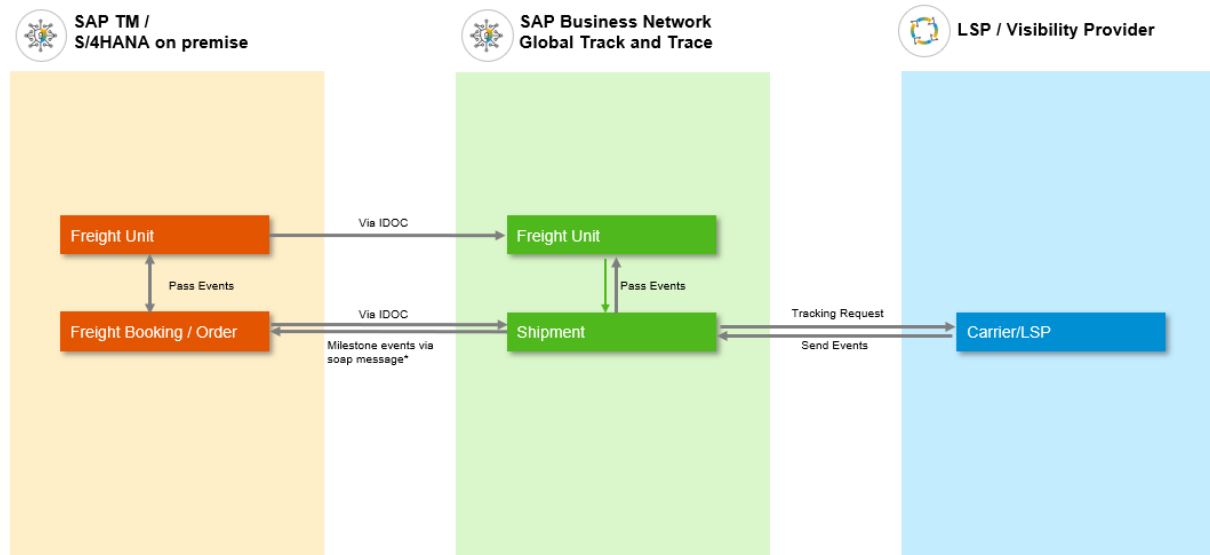
Width:

3. TRACKING VIA REFERENCE DOCUMENT (LEGACY VERSION)

You can still track the shipments and freight units via carrier reference document, such as Bill of Lading, Master Bill of Lading, Master Airway Bill, Reference number of Carrier. In this way, the shipment will be sent to visibility providers. The process integration flow is as follows:

TM Scenario

Process integration



*TransportationEventBulkNotification_In

To support this tracking scenario, you need to configure extractor settings and maintain reference document information on freight documents in SAP TM as follows:

3.1 Configure Extractor Settings

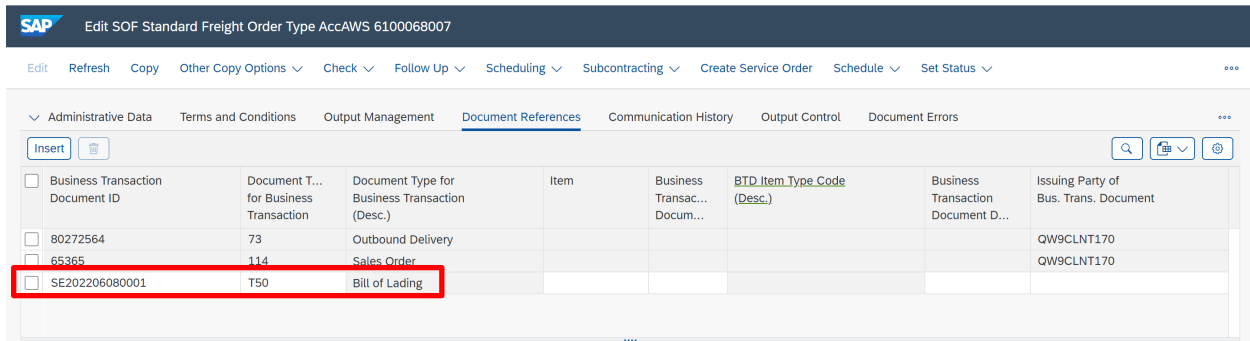
By default, the freight unit and the freight order are tracked via reference document. In this case, you do not need to configure the extractor settings. But you can still set "Maintain Reference Document on Freight Order/Booking" for relevant freight unit, freight order and freight booking document types.

SAP		
Display View "GTT Tracking Scenario Configuration Table"		
GTT Tracking Scenario Configuration Table		
Doc. Type	Scenario	
<input type="checkbox"/> STR1	01 Maintain Reference Document on Freight Order/Freight Booking	▼
<input type="checkbox"/> STU1	01 Maintain Reference Document on Freight Order/Freight Booking	▼
<input type="checkbox"/>		

3.2 Maintain Document No. on Freight Documents

To maintain the Document No. on different freight documents in SAP TM, do the following:

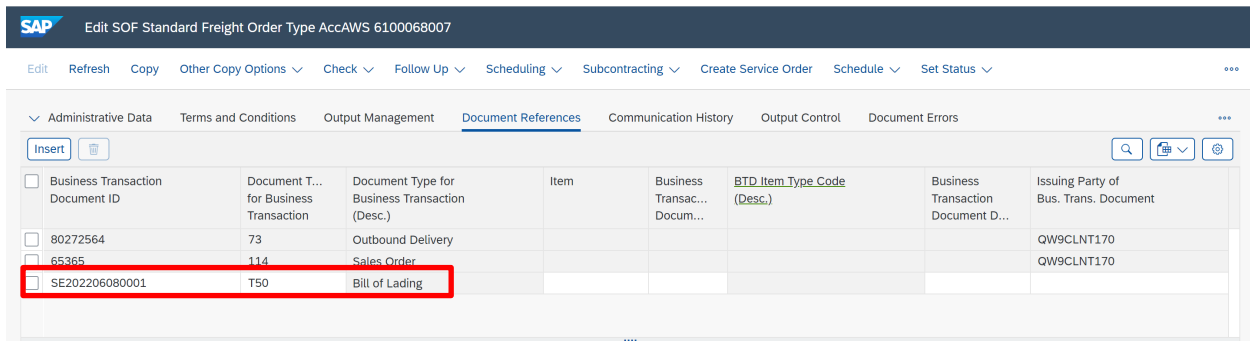
- For FTL: on Freight Order, in the **Document References** tab, fill in the Bill of Lading (T50) on Freight Order.



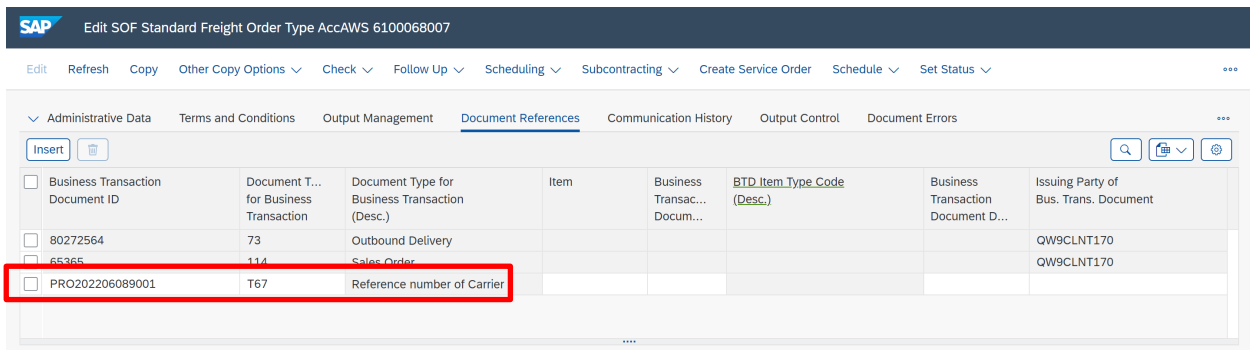
The screenshot shows the SAP TM interface for editing a Standard Freight Order (AccAWS 6100068007). The 'Document References' tab is active, displaying a table with columns: Business Transaction Document ID, Document T... for Business Transaction, Document Type for Business Transaction (Desc.), Item, Business Transac... Docum..., BTD Item Type Code (Desc.), Business Transaction Document D..., and Issuing Party of Bus. Trans. Document. The row for 'SE202206080001' with Document Type 'T50' and Description 'Bill of Lading' is highlighted with a red box.

Business Transaction Document ID	Document T... for Business Transaction	Document Type for Business Transaction (Desc.)	Item	Business Transac... Docum...	BTD Item Type Code (Desc.)	Business Transaction Document D...	Issuing Party of Bus. Trans. Document
80272564	73	Outbound Delivery					QW9CLNT170
65365	114	Sales Order					QW9CLNT170
SE202206080001	T50	Bill of Lading					

- For LTL: on Freight Order, in the **Document References** tab, fill in the Bill of Lading(T50) and Reference Number of Carrier (T67).



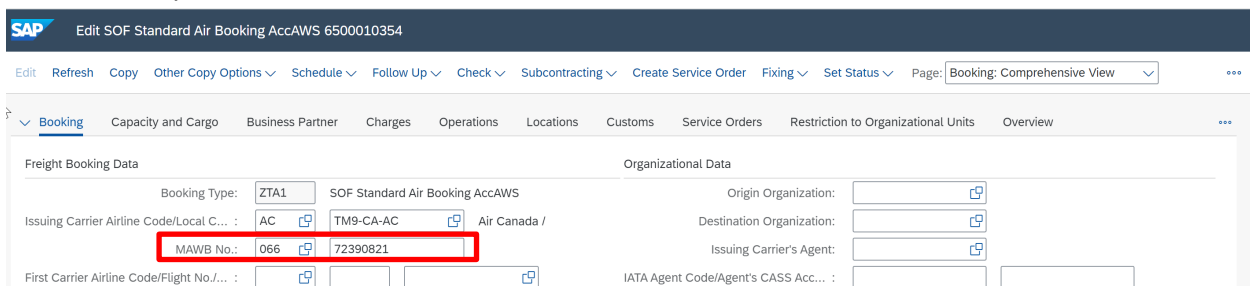
This screenshot is identical to the previous one, showing the SAP TM interface for editing a Standard Freight Order (AccAWS 6100068007) with the 'Document References' tab active. The row for 'SE202206080001' with Document Type 'T50' and Description 'Bill of Lading' is highlighted with a red box.



This screenshot shows the SAP TM interface for editing a Standard Freight Order (AccAWS 6100068007) with the 'Document References' tab active. The row for 'PRO202206089001' with Document Type 'T67' and Description 'Reference number of Carrier' is highlighted with a red box.

Business Transaction Document ID	Document T... for Business Transaction	Document Type for Business Transaction (Desc.)	Item	Business Transac... Docum...	BTD Item Type Code (Desc.)	Business Transaction Document D...	Issuing Party of Bus. Trans. Document
80272564	73	Outbound Delivery					QW9CLNT170
65365	114	Sales Order					QW9CLNT170
PRO202206089001	T67	Reference number of Carrier					

- For Air Tracking: on Freight Booking, in the **MAWB No.** field of the **Booking** tab, fill in the Master Airway Bill number.



The screenshot shows the SAP TM interface for editing a Standard Air Booking (AccAWS 6500010354). The 'Booking' tab is active, displaying the 'Freight Booking Data' section. The 'MAWB No.' field is highlighted with a red box, containing the value '066'. The 'SOF Standard Air Booking AccAWS' field is also visible.

Booking Type:	SOF Standard Air Booking AccAWS
ZTA1	

Issuing Carrier Airline Code/Local C... : AC TM9-CA-AC Air Canada /

MAWB No.: 066 72390821

First Carrier Airline Code/Flight No./... :

- For Ocean Tracking: on Freight Booking, in the **Carrier's Master Bill of Lading Number** field of the **General Data** tab, fill in the Master Bill of Lading number.

SAP Edit SOF Standard Ocean Booking AccAWS 6500010350

Edit Refresh Copy Other Copy Options Schedule Follow Up Check Subcontracting Create Service Order Fixing Set Status Load/Unload Plan Status (Stop)

General Data Business Partner Items Document Flow Execution Notes Attachments Statuses Blocking Information Subcontracting Carrier Ranking Charges

Freight Booking Data

Booking Type: ZTO1 SOF Standard Ocean Booking AccAWS

Carrier: SCAC:

Executing Carrier: SCAC:

Communication Party:

Steamship Line Booking Number:

Carrier's Master Bill of Lading Number: 20220609001

Booking Confirmation Status: 1 Not Sent to Carrier

Capacity Requirements

Container Count:

Confirmed Container Count:

Cargo Capacity:

Confirmed Cargo Capacity:

Organizational Data

Purchasing Organization:

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