

# API Developer Notes

## *Issuing a Ticket on the Galileo CRS*

*29 June 2012*

*Version 1.3*

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# Contents

<b>Overview .....</b>	<b>1</b>
<b>Issuing a Ticket on the Galileo CRS.....</b>	<b>2</b>
1. Setting Printer Linkage .....	2
2. Retrieving the PNR.....	3
3. Issuing a Ticket Using DocProdFareManipulation_# .....	3
4. Delinking All Devices .....	4
5. SessionSignOff and EndSession .....	5
<b>Other Transactions .....</b>	<b>6</b>
Using TicketRevalidate_#.....	6
Using TicketVoid_#.....	6
Including the FOP when Building the Booking File .....	6
Cash.....	6
Credit Card.....	7
Including the FOP when Issuing the Ticket.....	8
Cash.....	8
Credit Card.....	9
Include Multiple FOP to the Booking File .....	11
Including the Plating Carrier when Building the Booking File.....	13
Including the Plating Carrier when Issuing the Ticket .....	13
Defining the Printer.....	14
Setting the Printer to U (up) Status .....	14
Testing Printer Linkage Without Issuing a Ticket .....	14
Request.....	15
Response.....	15
Retrieving the Ticket Issue Date and Time .....	16
Retrieving the Ticket Number from a PNR .....	17

# Overview

This document assumes that:

- BeginSession is established.
- SessionSignOn is sent. SessionSignOn is not necessary for Galileo Web Services (GWS) customers.
- The ticket stock numbers are added to the agency ticket stock table. Contact your local SMO/NDC to find out if stock numbers have been added.
- The printer is defined. See the section Defining the Printer on page 14.
- The printer is in U (up) status. See the section Setting the Printer to U (up) Status on page 14.

# Issuing a Ticket on the Galileo CRS

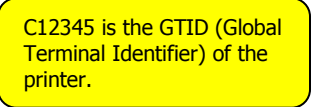
There are five steps to issuing a ticket after a session is established. GWS customers do not need to establish a session. The steps are:

1. Setting Printer Linkage.
2. Retrieving the PNR.
3. Issuing the ticket using the DocProdFareManipulation\_# transaction.
4. Delinking all devices.
5. Ending the session, if you are not a GWS customer.

## 1. Setting Printer Linkage

The following request sets the printer linkage.

```
<TicketPrinterLinkage_#>
  <LinkageUpdateMods>
    <PrinterParameters>
      <LNIATA>C12345</LNIATA>
      <Type>T</Type>
      <!-- T - (HMLM..DT) Ticket printer -->
      <!-- I - (HMLM..DI) Itinerary printer -->
      <!-- A - (HMLM..DA) Accounting (MIR) printer -->
    </PrinterParameters>
  </LinkageUpdateMods>
</TicketPrinterLinkage_#>
```



The equivalent terminal commands for the TicketPrinterLinkage\_# transaction are:

- HMLMC12345DT (for ATB printers)
- HMLMC12345DI (for Itinerary printers)
- HMLMC12345DA (for MIR issuing)

## 2. Retrieving the PNR

Before you can retrieve the PNR, the booking must include:

- A stored fare.
- A Plating Carrier. See the sections *Including the Plating Carrier when Building the Booking File* on page 13 and *Including the Plating Carrier when Issuing the Ticket* on page 13.
- A Form of Payment (FOP). See the sections *Including the FOP when Building the Booking File* on page 6 and *Including the FOP when Issuing the Ticket* on page 8.

**Note:** The FOP and Plating Carrier can be added at the same time as you issue the ticket. For example:

```
<PNRBFManagement_#>
  <PNRBFRetrieveMods>
    <PNRAddr>
      <RecLoc>MG123S</RecLoc>
    </PNRAddr>
  </PNRBFRetrieveMods>
</PNRBFManagement_#>
```

MG123S is the Record Locator.

## 3. Issuing a Ticket Using DocProdFareManipulation\_#

The DocProdFareManipulation\_# transaction controls the manipulation and redisplay of stored fares. It also allows MCOs and tickets to be issued for a specified fare within a PNR or BF.

**Note:** The PNR or BF must be end-transacted and retrieved prior to issuing tickets using the DocProdFareManipulation\_# transaction.

The following steps are required to issue a ticket using DocProdFareManipulation\_#:

1. Send the fare number in the <FareNumInfo> element.
2. Send the transaction type in <TicketingControl> element.

The response includes a <TicketingControl> element that contains a two-character code (**OK**) in the <TransType> element indicating that the ticket was issued. Any other code indicates failure, and the transaction must be resubmitted with additional data to resolve the cause of failure. The response includes the <ElectronicTicketFailed> element which has alternate ticketing information if the electronic ticket fails.

The following example request issues at once through all the previously linked printers:

```
<DocProdFareManipulation_#>
  <TicketingMods>
    <DocumentSelect>
      <ETInd>Y</ETInd>
    </DocumentSelect>
  <ElectronicTicketFailed>
```

Set to 'Y' if an electronic ticket is required (DLD, ET).  
Set to 'P' if a paper ticket is required (PT).  
Leave blank for system to determine type.

```

    <CancelInd>Y</CancelInd>
    <IssuePaperTkInd/>
    <IssuePaperTkToSTP/>
    <STPLocation/>
  </ElectronicTicketFailed>
  <FareNumInfo>
    <FareNumAry>
      <FareNum>1</FareNum>
    </FareNumAry>
  </FareNumInfo>
  <TicketingControl>
    <TransType>TK</TransType>
  </TicketingControl>
</TicketingMods>
</DocProdFareManipulation_#>

```

There is an e-ticket indicator, <ETktEligibility>, in FareQuoteSuperBB and AirAvailability where:

- E = Eligible
- X= Not Eligible
- Blank = No E-ticket data was received from the carrier.

The default can be either a paper ticket or an E-ticket, depending on the vendor and the location. You can override this default when issuing a print ticket command using DocProdFareManipulation\_#. For information about <TicketingMods> and <DocumentSelect>, see the XML Select help topic *DocProdFareManipulation\_#* in the *Transactions* book. In GWS help, the *Transactions* book is located in the *XML Select Service* book.

## 4. Delinking All Devices

The following request delinks the printer:

```

<TicketPrinterLinkage_#>
  <LinkageUpdateMods>
    <DelinkModifier/>
  </LinkageUpdateMods>
</TicketPrinterLinkage_#>

```

The equivalent terminal command for the TicketPrinterLinkage\_# transaction is **HMLM/DELINK**.

## 5. SessionSignOff and EndSession

Sign off from the existing host session (not necessary for GWS customers):

```
<SessionSignOff_#>  
  <SessionMods>  
    <SignOff/>  
  </SessionMods>  
</SessionSignOff_#>
```

Release the session token:

```
<EndSession xmlns="http://webservices.galileo.com">  
  <Token>String</Token>  
</EndSession>
```



## Other Transactions

### Using TicketRevalidate\_#

The TicketRevalidate\_# transaction performs ticket revalidation for E-tickets on the Galileo CRS only. This task can also be performed using the terminal entry **TKRET**. Presently, revalidation of paper tickets is not supported on either the Galileo or the Apollo CRSs via XML Select.

For more details and samples, see the *TicketRevalidate\_#* help topic in the *Transactions* book. In GWS help, the *Transactions* book is located in the *XML Select Service* book.

### Using TicketVoid\_#

The TicketVoid\_# transaction provides the ability to:

- Void ticketing documents.
- Unvoid ticketing documents.
- Mark ticketing documents as "spoiled".

For more details and samples, see the *TicketVoid\_#* help topic in the *Transactions* book. In GWS help, the *Transactions* book is located in the *XML Select Service* book.

## Including the FOP when Building the Booking File

### Cash

For more details and samples, see the *PNRBFManagement\_#* help topic in the *Transactions* book. In GWS help, the *Transactions* book is located in the *XML Select Service* book.

```
<PNRBFSecondaryBldChgMods>
  <ItemAry>
    <Item>
      <DataBlkInd>F</DataBlkInd>
      <FOPQual>
        <EditTypeInd>A</EditTypeInd>
        <AddChgQual>
          <TypeInd>1</TypeInd>
          <!-- Type of FOP (Form of Payment) that will be used. In this case, 1 means variable width, so
S (cash) can be used in the FOP field -->
          <VarLenQual>
            <FOP>S</FOP>
          </VarLenQual>
        </AddChgQual>
      </FOPQual>
    </Item>
  </ItemAry>
</PNRBFSecondaryBldChgMods>
```

```

</Item>
<Item>
  <DataBlkInd>E</DataBlkInd>
  <EndQual>
    <EndMark>E</EndMark>
  </EndQual>
</Item>
</ItemAry>
</PNRBFSecondaryBldChgMods>

```

## Credit Card

For more details and samples, see the *DocProdFareRequote\_#* help topic in the *Transactions* book. In GWS help, the *Transactions* book is located in the *XML Select Service* book.

```

<DocProdFareRequote_#>
  <UpdateModifiersMods>
    <FareNumInfo>
      <FareNumAry>
        <FareNum>1</FareNum>
      </FareNumAry>
    </FareNumInfo>
    <CreditCardFOP>
      <ID>6</ID>
      <Type>1</Type>
      <Currency/>
      <Amt>0</Amt>
      <ExpDt>1209</ExpDt>
      <TransType/>
      <ApprovalInd/>
      <AcceptOverride/>
      <ValidationBypassReq>N</ValidationBypassReq>
      <Vnd>CA</Vnd>
      <Acct>5422*****1139</Acct>
      <AdditionalInfoAry>
        <AdditionalInfo>
          <ID>1</ID>
          <Dt>06***4</Dt>
        </AdditionalInfo>
      </AdditionalInfoAry>
    </CreditCardFOP>
  </UpdateModifiersMods>

```

```
</DocProdFareRequote_#>
```

**Note:** If you add the approval code element, <AdditionalInfoAry>, you must enter a value in the <Dt> element or you receive an error.

The following is a successful response:

```
<DocProdFareRequote_#>
  <UpdateModifiers>
    <FareNumInfo>
      <FareNumAry>
        <FareNum>1 </FareNum>
      </FareNumAry>
    </FareNumInfo>
    <DPOK/>
  </UpdateModifiers>
</DocProdFareRequote_#>
```

**Note:** Galileo does not provide test credit cards numbers. *You must contact the credit card vendor and request test numbers.*

## Including the FOP when Issuing the Ticket

### Cash

For more details and samples, see the *DocProdFareManipulation\_#* help topic in the *Transactions* book. In GWS help, the *Transactions* book is located in the *XML Select Service* book.

```
<DocProdFareManipulation_#>
  <TicketingMods>
    <FareNumInfo>
      <FareNumAry>
        <FareNum>001</FareNum>
        <!-- 001 = Cash type form of payment -->
      </FareNumAry>
    </FareNumInfo>
    <TicketingControl>
      <TransType>TK</TransType>
      <!-- TK = Initial Ticket Entry -->
    </TicketingControl>
    <OtherFOP>
      <FOPID>01</FOPID>
      <!-- 01 = Identification Number for cash -->
      <Type/>
    </OtherFOP>
  </TicketingMods>
</DocProdFareManipulation_#>
```

```

    <PmtCrcy/>
    <Amt>000000000000</Amt>
    <AddIDataIDary>
      <AddIDataID>
        <ID/>
        <Dt/>
      </AddIDataID>
    </AddIDataIDary>
  </OtherFOP>
</TicketingMods>
</DocProdFareManipulation_#>

```

## Credit Card

For more details and samples, see the *DocProdFareManipulation\_#* help topic in the *Transactions* book. In GWS help, the *Transactions* book is located in the *XML Select Service* book.

```

<DocProdFareManipulation_#>
  <TicketingMods>
    <CreditCardFOP>
      <ID>6</ID>
      <Type>1</Type>
      <Currency/>
      <Amt>0</Amt>
      <ExpDt>1109</ExpDt>
      <TransType/>
      <ApprovalInd/>
      <AcceptOverride/>
      <ValidationBypassReq>N</ValidationBypassReq>
      <Vnd>CA</Vnd>
      <Acct>5422*****1139</Acct>
      <AdditionalInfoAry>
        <AdditionalInfo>
          <ID>1</ID>
          <Dt>0****4</Dt>
        </AdditionalInfo>
      </AdditionalInfoAry>
    </CreditCardFOP>
  </TicketingMods>
</DocProdFareManipulation_#>

```

**Note:** The approval code element, <Dt>, can be included, but it is not verified against the vendor.

A successful response (electronic ticket including MIR) is:

```
<DocProdFareManipulation_#>
  <Ticketing>
    <FareNumInfo>
      <FareNumAry>
        <FareNum>1 </FareNum>
      </FareNumAry>
    </FareNumInfo>
    <TicketingControl>
      <TransType>OK </TransType>
    </TicketingControl>
    <RecordLocator>
      <RecLoc>MBTRJG </RecLoc>
    </RecordLocator>
    <TextMsg>
      <Txt>ELECTRONIC TKT GENERATED TTL FARE USD 1133.50 </Txt>
    </TextMsg>
    <TextMsg>
      <Txt>SUPPORTING DOCUMENTS GENERATED </Txt>
    </TextMsg>
    <TextMsg>
      <Txt>MIR GENERATED - TTL FARE USD 1133.50 </Txt>
    </TextMsg>
    <TextMsg>
      <Txt>----- </Txt>
    </TextMsg>
  </Ticketing>
</DocProdFareManipulation_#>
```

**Note:** Galileo does not provide test credit cards numbers. *You must contact the credit card vendor and request test numbers.*

## Include Multiple FOP to the Booking File

Establish a session and retrieve the booking file (**Assumption:** The booking file includes all the necessary modifiers). For more details and samples, see the *DocProdFareManipulation\_#* help topic in the *Transactions* book. In GWS help, the *Transactions* book is located in the *XML Select Service* book.

```
<DocProdFareManipulation_#>
  <TicketingMods>
    <FareNumInfo>
      <FareNumAry>
        <FareNum>001</FareNum>
      </FareNumAry>
    </FareNumInfo>
    <TicketingControl>
      <TransType>TK</TransType>
    </TicketingControl>
    <OtherFOP>
      <FOPID>17</FOPID>
      <Type/>
      <PmtCrncy/>
      <Amt/>
      <AddDataIDAry>
        <AddDataID>
          <ID/>
          <Dt/>
        </AddDataID>
      </AddDataIDAry>
    </OtherFOP>
  </TicketingMods>
</DocProdFareManipulation_#>
```

The response is:

```
<DocProdFareManipulation_#>
  <Ticketing>
    <FareNumInfo>
      <FareNumAry>
        <FareNum>1 </FareNum>
      </FareNumAry>
    </FareNumInfo>
    <TicketingControl>
      <TransType>MR </TransType>
    </TicketingControl>
  </Ticketing>
</DocProdFareManipulation_#>
```

```
</Ticketing>
</DocProdFareManipulation_#>
```

Next, send the FOP (a credit card in this case):

```
<DocProdFareManipulation_#>
  <TicketingMods>
    <FareNumInfo>
      <FareNumAry>
        <FareNum>001</FareNum>
      </FareNumAry>
    </FareNumInfo>
    <TicketingControl>
      <TransType>MR</TransType>
    </TicketingControl>
    <CreditCardFOP>
      <ID>6</ID>
      <Type>1</Type>
      <Currency/>
      <Amt/>
      <ExpDt>1109</ExpDt>
      <TransType>2</TransType>
      <ApprovalInd/>
      <AcceptOverride/>
      <ValidationBypassReq/>
      <Vnd>CA</Vnd>
      <Acct>5436*****9239</Acct>
      <AdditionalInfoAry>
        <AdditionalInfo>
          <ID>1</ID>
          <Dt>011113</Dt>
        </AdditionalInfo>
      </AdditionalInfoAry>
    </CreditCardFOP>
  </TicketingMods>
</DocProdFareManipulation_#>
```

The response indicates that appropriate documents are generated:

```
<DocProdFareManipulation_#>
  <Ticketing>
    <TicketingControl>
```

```

    <TransType>OK </TransType>
  </TicketingControl>
  <RecordLocator>
    <RecLoc>MG0L4U </RecLoc>
  </RecordLocator>
  <TextMsg>
    <Txt>ELECTRONIC TKT GENERATED TTL FARE USD 1123.01 </Txt>
  </TextMsg>
  <TextMsg>
    <Txt>SUPPORTING DOCUMENTS GENERATED </Txt>
  </TextMsg>
  <TextMsg>
    <Txt>MIR GENERATED - TTL FARE USD 1123.01 </Txt>
  </TextMsg>
  <TextMsg>
    <Txt>----- </Txt>
  </TextMsg>
</Ticketing>
</DocProdFareManipulation_#>

```

## Including the Plating Carrier when Building the Booking File

```

<PNRBFManagement_#>
  <StorePriceMods>
    <PlatingAirVMods>
      <PlatingAirV>NM</PlatingAirV>
    </PlatingAirVMods>
  </StorePriceMods>
</PNRBFManagement_#>

```

For more details and samples, see the Galileo Web Services Help topic *XML Select Service > Transactions > PNRBFManagement\_#*.

## Including the Plating Carrier when Issuing the Ticket

```

<DocProdFareManipulation_#>
  <TicketingMods>
    <PlatingAirVMod>
      <AirV>NM</AirV>
    </PlatingAirVMod>
  </TicketingMods>
</DocProdFareManipulation_#>

```

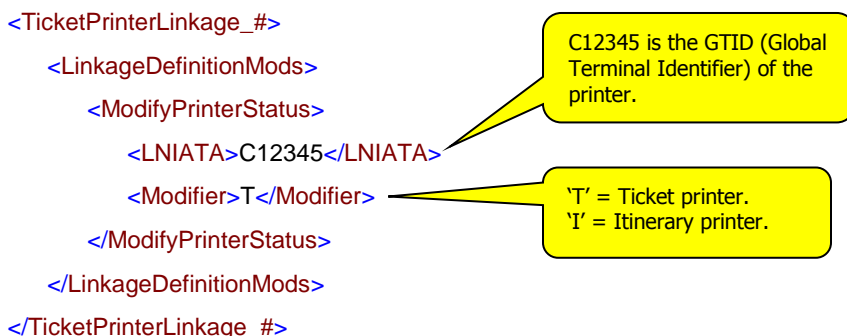


For more details and samples, see the Galileo Web Services Help topic *XML Select Service > Transactions > DocProdFareManipulation\_#*.

## Defining the Printer

The define printer command only needs to be executed the very first time a ticket is issued and only one time, using either terminal command **HMOMC12345-TKT** or the TicketPrinterLinkage\_# transaction. It is NOT necessary to execute this command each time a ticket is issued.

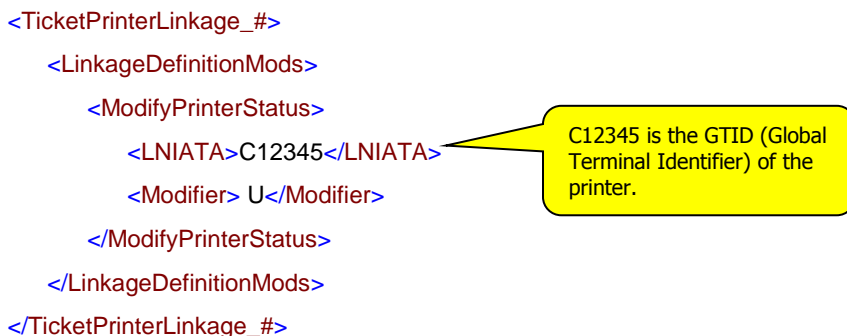
```
<TicketPrinterLinkage_#>
  <LinkageDefinitionMods>
    <ModifyPrinterStatus>
      <LNIATA>C12345</LNIATA>
      <Modifier>T</Modifier>
    </ModifyPrinterStatus>
  </LinkageDefinitionMods>
</TicketPrinterLinkage_#>
```



## Setting the Printer to U (up) Status

If the last attempt to issue a ticket was not successful, the printer status is not “U”, and the printer must be set to “U” status. Use the terminal command **HMOMC12345-U** or the TicketPrinterLinkage\_# transaction to change the printer status.

```
<TicketPrinterLinkage_#>
  <LinkageDefinitionMods>
    <ModifyPrinterStatus>
      <LNIATA>C12345</LNIATA>
      <Modifier> U</Modifier>
    </ModifyPrinterStatus>
  </LinkageDefinitionMods>
</TicketPrinterLinkage_#>
```



## Testing Printer Linkage Without Issuing a Ticket

A ticket printer is needed to issue a ticket. However, you can test your ticket printer linkages by creating a Machine Interface Record (MIR), which is a ticketing image that does not create a ticket. When you generate a MIR, it does not affect the final paper or E-ticket.

The MIR transmits accounting and MIS (miscellaneous) information, but it does not produce documents for the back office system. The MIR is a snapshot of the booking file at the time it is created and sent to the back office system. All of the information sent is from the booking file at the time the original MIR was generated.

To create a MIR, you need a MIR GTID that is linked to a printer. See the section *Setting Printer Linkage* for more information on linking to a printer.

## Request

The following example is a typical request to test printer linkage with a MIR:

```
<DocProdFareManipulation_#>
  <TicketingMods>
    <ElectronicTicketFailed>
      <CancelInd>Y</CancelInd>
      <IssuePaperTkInd/>
      <IssuePaperTkToSTP/>
      <STPLocation/>
    </ElectronicTicketFailed>
  <FareNumInfo>
    <FareNumAry>
      <FareNum>1</FareNum>
    </FareNumAry>
  </FareNumInfo>
  <TicketingControl>
    <TransType>TK</TransType>
  </TicketingControl>
</TicketingMods>
</DocProdFareManipulation_#>
```

## Response

The following is the successful response to the MIR generation request in the previous section:

```
<DocProdFareManipulation_#>
  <Ticketing>
    <FareNumInfo>
      <FareNumAry>
        <FareNum>1 </FareNum>
      </FareNumAry>
    </FareNumInfo>
    <TicketingControl>
      <TransType>OK </TransType>
    </TicketingControl>
    <RecordLocator>
      <RecLoc>W7RD10 </RecLoc>
    </RecordLocator>
    <TextMsg>
      <Txt>MIR GENERATED - TTL FARE USD 125.96 </Txt>
    </TextMsg>
```

```
</Ticketing>
</DocProdFareManipulation_#>
```

## Retrieving the Ticket Issue Date and Time

When you retrieve the PNR, you can find the ticket issue date and time in the <TkArrangement> element:

```
<TkArrangement>
  <Text>XDB 29JAN1702Z 48 AG</Text>
</TkArrangement>
```

With an E-ticket, you can find the ticket issued date using the DocProdFareManipulation\_# request, as well:

```
<DocProdFareManipulation_#>
  <ElectronicTicketDataMods>
    <TicketNum>
      <TkNum>0759900503623</TkNum>
    </TicketNum>
  </ElectronicTicketDataMods>
</DocProdFareManipulation_#>
```

In the following response, you can find the issue date in the <Txt> element:

```
<DocProdFareManipulation_#>
  <ETicketInfo>
    <TextMsg>
      <Txt>TKT: 075 9900 503623 NAME: ARIAS/INAKI </Txt>
    </TextMsg>
    <TextMsg>
      <Txt/>
    </TextMsg>
    <TextMsg>
      <Txt>ISSUED: 12MAR07 FOP:CASH </Txt>
    </TextMsg>
    <TextMsg>
      <Txt>PSEUDO: 0J8Z PLATING CARRIER: IB ISO: GB IATA: 99999992 </Txt>
    </TextMsg>
    <TextMsg>
      <Txt> USE CR FLT CLS DATE BRDOFF TIME ST F/B FARE CPN </Txt>
    </TextMsg>
    <TextMsg>
      <Txt> OPEN IB 0448 L 23OCT MADBIO 0825 OK LDTUR5 1 </Txt>
    </TextMsg>
```

```

<TextMsg>
  <Txt> NVB23OCT NVA23OCT </Txt>
</TextMsg>
<TextMsg>
  <Txt/>
</TextMsg>
<TextMsg>
  <Txt>FARE EUR 93.00 TAX 3.20 JD TAX 1.00 QV TAX 6.80 YQ </Txt>
</TextMsg>
<TextMsg>
  <Txt>TOTAL GBP 74.00 </Txt>
</TextMsg>
<TextMsg>
  <Txt>EQUIV GBP 63.00 </Txt>
</TextMsg>
<TextMsg>
  <Txt> CHANGES RESTRICTED </Txt>
</TextMsg>
<TextMsg>
  <Txt/>
</TextMsg>
<TextMsg>
  <Txt>MAD IB BIO Q15.00 78.00LDTUR5 EUR93.00END </Txt>
</TextMsg>
<TextMsg>
  <Txt>RLOC 1G L62PKE 1A Y4DTHS </Txt>
</TextMsg>
</ETicketInfo>
</DocProdFareManipulation_#>

```

## Retrieving the Ticket Number from a PNR

Display the PNR then submit the DocProdFareManipulation\_# transaction with the <TicketNumbersMods> element to retrieve the list of ticket numbers in the PNR.

```

<DocProdFareManipulation_#>
  <TicketNumbersMods/>
</DocProdFareManipulation_#>

```