D&H Canada Customer XML Integration

DH.IS.WEB.XML.2

April 3, 2017

A reference detailing the intended methods for customer XML integrations with D&H. The contents of this manual are intended for the use of Canada D&H customers only. This document should be distributed in its entirety.

Summary of Changes

Date	Change
04/03/2017	Added End User Data elements.
02/28/2017	Expanded explanation of partial shipment and backorder combinations.
09/06/2016	Order Status Response - <XMLRESPONSE> - <MESSAGE> - Contents Order Status Response - <XMLRESPONSE> - <ORDERSTATUS> - <PACKAGE> - Contents

Contents

XML Integration

D&H's XML integration functions as an extension of DandH.ca. Account management is handled via account management through DandH.ca.

Terminology

- **Account**: Company's 10-digit reference number within D&H systems.
- **Subaccount**: A 10-digit account number derived from the company's main account. Shares the same 6-digit (AcctNoAR) reference number as the main account.
- **UserCode**: Used to describe the username, userid, login name etc.… used to authenticate access to DandH.ca.
- **PO**: (Purchase Order) refers to the purchase order number assigned to an order by the customer. For XML requests, this number must be unique per account.
- **Spawned Order**: A separate order created from an original order due to shipments from different branch or backorder.

Submission Methods

There are 3 methods that can be used to post the document to D&H

1. **HTTP POST**
2. **HTML form POST**
   a. Create an HTTP POST request containing a form field named "xmlDoc", and include your XML document as the value of the "xmlDoc" field.
3. **SOAP**
   a. Enclose your XML document in a SOAP envelope.

   Submit Canada requests to this URL: https://www.dandh.ca/dhXML/xmlDispatch

Implementation

General

- The messages that can be returned as a result of an XML request vary and are subject to change without notice. Elements and values that can be programmatically written to are provided within Specifications.
- Malformed or unparsable XML errors are often the result of invalid special characters or byte order marks (BOM) embedded within XML requests.

Order Entry

- Addresses that exceed the element size as listed in Specifications shall appear truncated on shipping labels.
- If the <SHIPTOADDRESS> element is empty or not included, orders will be shipped to the default shipping address on the account.
- For accounts that have dropship permissions, if the <SHIPTOADDRESS> element contains a valid value, the order will be drop shipped to this address, provided valid <SHIPTOCITY>, <SHIPTOPROVINCE>, and <SHIPTOPOSTALCODE> elements are provided.

Partial Shipments and Backorders

<PARTSHIPALLOW> = N & <BACKORDERALLOW> = N
- Order will be fulfilled from the specified/best branch(s) as long as all quantities are available at the specified/default branch. No quantities sent to backorder, all quantities must be fulfilled or order will fail.

<PARTSHIPALLOW> = Y & <BACKORDERALLOW> = N
- Order will be fulfilled from the specified/best branch(s). If full item quantity is not available, the next best branch (based on ship to) will be used to obtain remaining quantity. No quantities sent to backorder, remaining unavailable quantities are ignored. If all item quantities are unavailable, order will fail.

<PARTSHIPALLOW> = N & <BACKORDERALLOW> = Y
- Order will be fulfilled from the specified/best branch(s). Unavailable quantities are sent to backorder.

<PARTSHIPALLOW> = Y & <BACKORDERALLOW> = Y
- Order will be fulfilled from the specified/best branch(s). If full item quantity is not available, the next best branch (based on ship to) will be used to obtain remaining quantity. Unavailable quantities are sent to backorder.

Order Status

- Backordered items generate an additional <ORDERSTATUS> element. The initial <ORDERSTATUS> on order receipt spawns additional order number(s) for backordered items. For <ORDERSTATUS> elements containing <INVTOTAL> element values of 0 and <QTYBO> element values greater than 0, refer to spawned order numbers.

Shipping

- Customers that wish to have an order shipped LTL should specify so in the <REMARKS> element. This will force the order to stop with the sales representative to be modified. To ship LTL on a continuous basis, a new subaccount should be created and configured to default ship LTL. Orders placed under the subaccount would automatically ship LTL.
- Ship via is the combination of <SHIPCARRIER> and <SHIPSERVICE> elements.
- When <ONLYBRANCH> and <BRANCH> are not specified, Best Branch Logic will be utilized, based on the Ship-To address, to determine the distribution center to ship the order.

Specifications

The examples included in this document are meant to serve as a guide, and do not represent all of the possible variations of request submissions or responses.

XML Request Data Types

- String
- Integer
- Logical (Boolean)
- Complex (Contain child elements)

XML Request Conditions

- Required: The element must be included.
- Optional: The element does not need to be included or only needs to be included when certain criteria are met.
- Option: One of multiple possible elements is required, dependent on the nature of the request.

Failure Response

All XML requests return the same failure response format (Figure 1).

```
<?xml version="1.0" encoding="UTF-8" ?>
<XMLRESPONSE>
  <STATUS>failure</STATUS>
  <MESSAGE>{Request failure message}</MESSAGE>
</XMLRESPONSE>
```
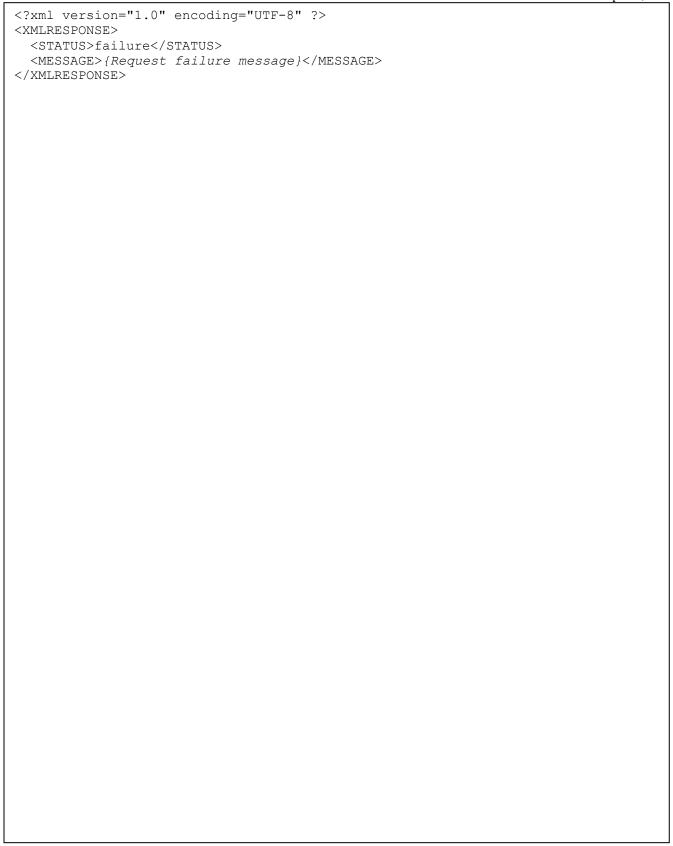
Figure 1 – Standard Request Failure Response

Price and Availability Request

Price and/or Availability requests are made to receive real-time item prices and/or inventory availability. Requests may be submitted for price only, availability only, or combined price and availability. Multiple item numbers may be submitted per request. (Figures 2 thru 4)

<XMLFORMPOST>
        Condition: Required
        Parent: None
        Type: Complex
        Size: N/A
        Contents: Elements:
                <REQUEST>
                <LOGIN>
                <PARTNUM>

<REQUEST>
        Condition: Required
        Parent: <XMLFORMPOST>
        Type: String
        Size: 25
        Valid Values: 'price', 'availability', 'price-availability'
        Contents: The type of request.
                'price' returns price only
                'availability' returns available quantity only
                'price-availability' returns both

<LOGIN>
        Condition: Required
        Parent: <XMLFORMPOST>
        Type: Complex
        Size: N/A
        Contents: Elements:
                <USERID>
                <PASSWORD>

<USERID>
        Condition: Required
        Parent: <LOGIN>
        Type: String
        Size: 50
        Contents: DandH.com/ DandH.ca UserCode

<PASSWORD>
        Condition: Required
        Parent: <LOGIN>
        Type: String
        Size: 30
        Contents: The password associated with UserCode

<PARTNUM>
        Condition: Required
        Parent: <XMLFORMPOST>
        Type: String
        Size: 15
        Contents: The D&H item number for which information is being requested. This element may occur up to 50 times for separate price or availability requests, or up to 25 times for combined price-availability.

```
<!DOCTYPE html>
<html>
  <head>
    <title>D&H Price and Availability Request</title>
  </head>
  <body onLoad="document.forms[0].submit()">
    <div align="center">
      <form method="post" action="https://www.dandh.ca/dhXML/xmlDispatch">
        <input type="hidden" name="xmlDoc"
          value="<XMLFORMPOST>
                  <REQUEST>price-availability</REQUEST>
                  <LOGIN>
                    <USERID>{UserCode}</USERID>
                    <PASSWORD>{Password}</PASSWORD>
                  </LOGIN>
                  <PARTNUM>STYLUSCOLOR880</PARTNUM>
                </XMLFORMPOST>" />
      </form>
    </div>
  </body>
</html>
```

Figure 2 – Canada Price and Availability Request HTML Form Post on Document Load

```
<!DOCTYPE html>
<html>
  <head>
    <title>D&H Availability Request</title>
  </head>
  <body>
    <div align="center">
      <form method="post" action="https://www.dandh.ca/dhXML/xmlDispatch">
        <input type="hidden" name="xmlDoc"
          value="<XMLFORMPOST>
                  <REQUEST>availability</REQUEST>
                  <LOGIN>
                    <USERID>{UserCode}</USERID>
                    <PASSWORD>{Password}</PASSWORD>
                  </LOGIN>
                  <PARTNUM>52T</PARTNUM>
                  <PARTNUM>STYLUSCOLOR880</PARTNUM>
                </XMLFORMPOST>" />
        <input type="submit" value="Submit Availability Request" />
      </form>
    </div>
  </body>
</html>
```

Figure 3 – Canada Availability Request HTML Form Post

```
var DataToSend = '<?xml version="1.0" encoding="UTF-8"?>' +
'<SOAP-ENV:Envelope   xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
SOAP-ENV:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">' +
'<SOAP-ENV:Body>' +
'<XMLFORMPOST>' +
'<REQUEST>price</REQUEST>' +
'<LOGIN>' +
'<USERID>{UserCode}</USERID>' +
'<PASSWORD>{Password}</PASSWORD>' +
'</LOGIN>' +
'<PARTNUM>52T</PARTNUM>' +
'<PARTNUM>STYLUSCOLOR880</PARTNUM>' +
'</XMLFORMPOST>' +
'</SOAP-ENV:Body>' +
'</SOAP-ENV:Envelope>';

var xmlhttp = new ActiveXObject("Microsoft.XMLHTTP");
xmlhttp.Open("POST","https://www.dandh.ca/dhXML/xmlDispatch",false);
xmlhttp.setRequestHeader("Content-Type", "text/xml");
xmlhttp.setRequestHeader("SOAPAction","urn:x-progress-soap-1.0:asbroker1#");
xmlhttp.send(DataToSend);
```

Figure 4 – Canada Price Request SOAP Envelope in JavaScript

Price and Availability Response

Price and/or Availability responses contain the information requested from a Price and/or Availability Request. The response will contain an <ITEM> element for each <PARTNUM> element that was enclosed in the request. (Figures 5 thru 8)

<XMLRESPONSE>
    Parent: None
    Type: Complex
    Contents: Elements:
        <ITEM>
        <STATUS>
        <MESSAGE>

<ITEM>
    Parent: <XMLRESPONSE>
    Type: Complex
    Contents: Elements:
        <PARTNUM>
        <UNITPRICE> (price requests)
        <BRANCHQTY> (availability requests)
        <TOTALQTY> (availability requests)
        <MESSAGE>

<PARTNUM>
    Parent: <ITEM>
    Type: String
    Contents: The D&H item number.

<UNITPRICE>
    Parent: <ITEM>
    Type: Decimal
    Contents: The item price.

<BRANCHQTY>
    Parent: <ITEM>
    Type: Complex
    Contents: Elements:
        <BRANCH>
        <QTY>
        <INSTOCKDATE>

<BRANCH>
    Parent: <BRANCHQTY>
    Type: String
    Contents: The D&H distribution center name.

<QTY>
    Parent: <BRANCHQTY>
    Type: Integer
    Contents: The quantity in stock at the specified distribution center.

<INSTOCKDATE>
    Parent: <BRANCHQTY>
    Type: String
    Contents: For items that are out of stock, the expected in stock date, if available.

<TOTALQTY>
    Parent: <ITEM>
    Type: Integer
    Contents: The sum in stock quantity of all branches.

<MESSAGE>
    Parent: <ITEM>
    Type: String
    Contents: Any item level error messages.

<STATUS>
    Parent: <XMLRESPONSE>
    Type: String
    Contents: 'success' or 'failure'
        If 'success', <XMLRESPONSE> will contain <ITEM>.
        If 'failure', <XMLRESPONSE> will contain <MESSAGE>.

<MESSAGE>
    Parent: <XMLRESPONSE>
    Type: String
    Contents: Error message or notification regarding request failure.

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<XMLRESPONSE>
  <ITEM>
    <PARTNUM>52T</PARTNUM>
    <UNITPRICE>6.63</UNITPRICE>
    <BRANCHQTY>
      <BRANCH>Toronto</BRANCH>
      <QTY>17</QTY>
      <INSTOCKDATE />
    </BRANCHQTY>
    <TOTALQTY>17</TOTALQTY>
  </ITEM>
  <ITEM>
    <PARTNUM>STYLUSCOLOR880</PARTNUM>
    <UNITPRICE>75.48</UNITPRICE>
    <BRANCHQTY>
      <BRANCH>Toronto</BRANCH>
      <QTY>0</QTY>
      <INSTOCKDATE>01/15/11</INSTOCKDATE>
    </BRANCHQTY>
    <TOTALQTY>0</TOTALQTY>
  </ITEM>
  <STATUS>success</STATUS>
</XMLRESPONSE>
```

Figure 5 – Canada Price and Availability Response

```
<?xml version="1.0" encoding="UTF-8" ?>
<XMLRESPONSE>
  <ITEM>
    <PARTNUM>52T</PARTNUM>
    <UNITPRICE>6.63</UNITPRICE>
  </ITEM>
  <ITEM>
    <PARTNUM>STYLUSCOLOR880</PARTNUM>
    <UNITPRICE>75.48</UNITPRICE>
  </ITEM>
  <STATUS>success</STATUS>
</XMLRESPONSE>
```

Figure 6 – Price Response

```
<?xml version="1.0" encoding="UTF-8" ?>
<XMLRESPONSE>
  <ITEM>
    <PARTNUM>52T</PARTNUM>
      <BRANCH>Toronto</BRANCH>
      <QTY>203</QTY>
      <INSTOCKDATE />
    </BRANCHQTY>
    <TOTALQTY>203</TOTALQTY>
  </ITEM>
  <STATUS>success</STATUS>
</XMLRESPONSE>
```

Figure 7 – Canada Availability Response

```
<?xml version="1.0" encoding="UTF-8" ?>
<XMLRESPONSE>
  <ITEM>
    <PARTNUM>123ABC</PARTNUM>
    <MESSAGE>{Item level failure message}</MESSAGE>
  </ITEM>
  <STATUS>success</STATUS>
</XMLRESPONSE>
```

Figure 8 – Price and Availability Response: Item Level Failure

Order Entry Request

Order Entry requests are made to submit orders. Multiple items may be submitted per request by including an <ITEM> element for each item within the <ORDERITEMS> element. For drop ship authorized accounts, if <SHIPTO•> elements are used, the order will be drop shipped to the address specified; otherwise orders will default to the shipping address on file. *Certain <SHIPTO•> elements are required for drop shipping. (Figure 9)

<XMLFORMPOST>
    Condition: Required
    Parent: None
    Type: Complex
    Size: N/A
    Contents: Elements
        <REQUEST>
        <LOGIN>
        <ORDERHEADER>
        <ORDERITEMS>

<REQUEST>
    Condition: Required
    Parent: <XMLFORMPOST>
    Type: String
    Size: 25
    Valid Values: 'orderEntry'
    Contents: The type of request.

<LOGIN>
    Condition: Required
    Parent: <XMLFORMPOST>
    Type: Complex
    Size: N/A
    Contents: Elements
        <USERID>
        <PASSWORD>

<USERID>
    Condition: Required
    Parent: <LOGIN>
    Type: String
    Size: 50
    Contents: DandH.com/ DandH.ca UserCode

<PASSWORD>
    Condition: Required
    Parent: <LOGIN>
    Type: String
    Size: 30
    Contents: The password associated with UserCode

<ORDERHEADER>
    Condition: Required
    Parent: <XMLFORMPOST>
    Type: Complex
    Size: N/A
    Contents: Elements:
        <PONUM>
        <SHIPCARRIER>
        <SHIPSERVICE>
        <ONLYBRANCH>
        <PARTSHIPALLOW>
        <BACKORDERALLOW>
        <DROPSHIPPW>
        <SHIPTONAME>
        <SHIPTOATTN>
        <SHIPTOADDRESS>
        <SHIPTOADDRESS2>
        <SHIPTOCITY>
        <SHIPTOPROVINCE>
        <SHIPTOPOSTALCODE>
        <REMARKS>
        <ENDUSERDATA

<PONUM>
    Condition: Required
    Parent: <ORDERHEADER>
    Type: String
    Size: 30
    Contents: The unique Purchase Order number for the order. May not be duplicated with any other order from the account.

<SHIPCARRIER>
    Condition: Required
    Parent: <ORDERHEADER>
    Type: String
    Size: 9
    Valid Values: 'Pickup', 'UPS', 'Purolator'
    Contents: The Ship Via carrier preference.

<SHIPSERVICE>
    Condition: Required
    Parent: <ORDERHEADER>
    Type: String
    Size: 12
    Valid Values: 'Pickup', 'Ground', '2nd Day Air', 'Next Day Air'
    Contents: The Ship Via service level.

<ONLYBRANCH>
    Condition: Optional
    Parent: <ORDERHEADER>
    Type: String
    Size: 15
    Valid Values: 'Toronto'
    Contents: The Only D&H branch to ship the entire order from. This element will be overridden by the <BRANCH> element at the item detail level.

<PARTSHIPALLOW>
    Condition: Optional
    Parent: <ORDERHEADER>
    Type: Logical
    Size: 1
    Valid Values: 'Y', 'N'
    Contents: Determines whether to allow partial shipments. The default allows for partial shipments when all items and quantities contained in an order are not available at a specific distribution center. 'N' will prevent partial shipments. Combined with <BACKORDERALLOW> could cause orders to be cancelled in the event they cannot be completed as desired.

<BACKORDERALLOW>
    Condition: Optional
    Parent: <ORDERHEADER>
    Type: Logical
    Size: 1
    Valid Values: 'Y', 'N'
    Contents: Determines whether items that are not available are to be backordered. The default allows for items to be backordered when unavailable. 'N' will prevent items from being backordered. Combined with <PARTSHIPALLOW> could cause orders to be cancelled in the event they cannot be completed as desired.

<DROPSHIPPW>
    Condition: Optional
    Parent: <ORDERHEADER>
    Type: String
    Size: 30
    Contents: If a drop ship password is assigned to the account, this element becomes required for drop ship orders. Drop ship authorized accounts only.

<SHIPTOADDRESS>
    Condition: Optional*
    Parent: <ORDERHEADER>
    Type: String
    Size: 30
    Contents: The street address shipped to Drop ship authorized accounts only.

<SHIPTOADDRESS2>
    Condition: Optional
    Parent: <ORDERHEADER>
    Type: String
    Size: 30
    Contents: Additional field provided for the street address being shipped to. Drop ship authorized accounts only.

<SHIPTONAME>
    Condition: Optional*
    Parent: <ORDERHEADER>
    Type: String
    Size: 25
    Contents: The Ship-To name. Drop ship authorized accounts only.

<SHIPTOATTN>
    Condition: Optional
    Parent: <ORDERHEADER>
    Type: String
    Size: 30
    Contents: The Ship-To attention line. Drop ship authorized accounts only.

<SHIPTOCITY>
    Condition: Optional*
    Parent: <ORDERHEADER>
    Type: String
    Size: 18
    Contents: The Ship-To city. Drop ship authorized accounts only.

<SHIPTOPROVINCE>
    Condition: Optional*
    Parent <ORDERHEADER>
    Type: String
    Size: 2
    Valid Values: Must be a valid USPS two character province code.
    Contents: The Ship-To province. Drop ship authorized accounts only.

<SHIPTOPOSTALCODE>
>Condition: Optional*
>Parent: <ORDERHEADER>
>Type: String
>Size: 10
>Valid Values: The six (6) characters, space separated postal code.
>Contents: The Ship-To postal code. Drop ship authorized accounts only.

<REMARKS>
>Condition: Optional
>Parent: <ORDERHEADER>
>Type: String
>Size: 58
>Contents: Any special instructions regarding the order. Any entry in this element will cause the order to be placed in "On Hold" status awaiting sales representative processing.

<ENDUSERDATA>
>Condition: Optional
>Parent: <ORDERHEADER>
>Type: Complex
>Size: N/A
>Contents: Elements
>>   <ORGANIZATION>
>>   <ATTENTION>
>>   <ADDRESS>
>>   <ADDRESS2>
>>   <CITY>
>>   <PROVINCE>
>>   <POSTALCODE>
>>   <PONUM>
>>   <DEPARTMENT>
>>   <PHONE>
>>   <FAX>
>>   <EMAIL>
>>   <AUTHQUOTENUM>
>>   <MCN>
>>   <CCOIDNUM>
>>   <SERIALNUM>
>>   <ESDEMAIL>
>>   <RESELLEREMAIL>

<ORGANIZATION>
>Condition: Optional
>Parent: <ENDUSERDATA>
>Type: String
>Size: 30
>Contents: End user organization.

<ATTENTION>
>Condition: Optional
>Parent: <ENDUSERDATA>
>Type: String
>Size: 30
>Contents: End user attention to.

<ADDRESS>
>Condition: Optional
>Parent: <ENDUSERDATA>
>Type: String
>Size: 30
>Contents: End user street address.

<ADDRESS2>
>Condition: Optional
>Parent: <ENDUSERDATA>
>Type: String
>Size: 30
>Contents: Additional field provided for end user street address.

<CITY>
>Condition: Optional
>Parent: <ENDUSERDATA>
>Type: String
>Size: 18
>Contents: End user city.

<PROVINCE>
>Condition: Optional
>Parent: <ENDUSERDATA>
>Type: String
>Size: 2
>Valid Values: Must be a valid USPS two character province code.
>Contents: End user province code.

<POSTALCODE>
>Condition: Optional
>Parent: <ENDUSERDATA>
>Type: String
>Size: 10
>Valid Values: The six (6) characters, space separated postal code.
>Contents: End user postal code.

<PONUM>
>Condition: Optional
>Parent: <ENDUSERDATA>
>Type: String
>Size: 30
>Contents: End user PO Number.

<DEPARTMENT>
Condition: Optional
Parent: <ENDUSERDATA>
Type: String
Size: 50
Contents: End user department.

<PHONE>
Condition: Optional
Parent: <ENDUSERDATA>
Type: String
Size: 15
Contents: End user phone number.

<FAX>
Condition: Optional
Parent: <ENDUSERDATA>
Type: String
Size: 15
Contents: End user fax number.

<EMAIL>
Condition: Optional
Parent: <ENDUSERDATA>
Type: String
Size: 50
Contents: End user email address.

<AUTHQUOTENUM>
Condition: Optional
Parent: <ENDUSERDATA>
Type: String
Size: 50
Contents: Authorization quote number.

<MCN>
Condition: Optional
Parent: <ENDUSERDATA>
Type: String
Size: 50
Contents: Master contract number.

<CCOIDNUM>
Condition: Optional
Parent: <ENDUSERDATA>
Type: String
Size: 50
Contents: CCOID number.

<SERIALNUM>
Condition: Optional
Parent: <ENDUSERDATA>
Type: String
Size: 50
Contents: Serial number.

<ESDEMAIL>
Condition: Optional
Parent: <ENDUSERDATA>
Type: String
Size: 50
Contents: End user email address for Electronic Software Distribution.

<RESELLEREMAIL>
Condition: Optional
Parent: <ENDUSERDATA>
Type: String
Size: 50
Contents: Reseller email address.

<ORDERITEMS>
Condition: Required
Parent: <XMLFORMPOST>
Type: Complex
Size: N/A
Contents: Elements:
<ITEM>

<ITEM>
Condition: Required
Parent: <ORDERITEMS>
Type: Complex
Size: N/A
Contents: Elements:
<PARTNUM>
<QTY>
<BRANCH>
<PRICE>

<PARTNUM>
Condition: Required
Parent: <ITEM>
Type: String
Size: 15
Contents: The D&H item number being ordered.

<QTY>
Condition: Required
Parent: <ITEM>
Type: Integer
Size: 5
Contents: The requested quantity of the item being ordered.

<BRANCH>
      Condition: Optional
      Parent: <ITEM>
      Type: String
      Size: 15
      Valid Values: 'Toronto'
      Contents: The only D&H Branch to ship the line
      item from. This element will override the value
      of the header level <ONLYBRANCH> element.

<PRICE>
      Condition: Optional
      Parent: <ITEM>
      Type: Decimal
      Size: N/A
      Contents: Only available to select customers.
      The customer requested item price.

```html
<!DOCTYPE html>
<html>
  <head>
    <title>D&H Order Entry Request</title>
  </head>
  <body>
    <div align="center">
      <form method="post" action="https://www.dandh.ca/dhXML/xmlDispatch">
        <input type="hidden" name="xmlDoc"
          value="<XMLFORMPOST>
                    <REQUEST>orderEntry</REQUEST>
                    <LOGIN>
                      <USERID>{UserCode}</USERID>
                      <PASSWORD>{Password}</PASSWORD>
                    </LOGIN>
                    <ORDERHEADER>
                      <ONLYBRANCH></ONLYBRANCH>
                      <PARTSHIPALLOW>N</PARTSHIPALLOW>
                      <BACKORDERALLOW>N</BACKORDERALLOW>
                      <DROPSHIPPW>{Dropship Password}</DROPSHIPPW>
                      <SHIPTONAME>{Dropship Name}</SHIPTONAME>
                      <SHIPTOATTN>{Dropship Attention}</SHIPTOATTN>
                      <SHIPTOADDRESS>{Dropship Street Address}</SHIPTOADDRESS>
                      <SHIPTOADDRESS2>{Dropship Address Line 2}</SHIPTOADDRESS2>
                      <SHIPTOCITY>{Dropship City}</SHIPTOCITY>
                      <SHIPTOPROVINCE>{Dropship Province}</SHIPTOPROVINCE>
                      <SHIPTOPOSTALCODE>{Dropship Postal Code}</SHIPTOPOSTALCODE>
                      <SHIPCARRIER>{Shipping Carrier}</SHIPCARRIER>
                      <SHIPSERVICE>{Shipping Service Level}</SHIPSERVICE>
                      <PONUM>{Purchase Order Number}</PONUM>
                      <REMARKS>{Order Remarks}</REMARKS>
                    </ORDERHEADER>
                    <ORDERITEMS>
                      <ITEM>
                        <PARTNUM>STYLUSCOLOR880</PARTNUM>
                        <QTY>5</QTY>
                        <BRANCH>Toronto</BRANCH>
                      </ITEM>
                      <ITEM>
                        <PARTNUM>52T</PARTNUM>
                        <QTY>1</QTY>
                      </ITEM>
                    </ORDERITEMS>
                  </XMLFORMPOST>" />
        <input type="submit" value="Submit Order Entry Request" />
      </form>
    </div>
  </body>
</html>
```

Figure 9 – Canada Order Entry Request HTML Form Post

```
<!DOCTYPE html>
<html>
  <head>
    <title>D&H Order Entry Request</title>
  </head>
  <body>
    <div align="center">
      <form method="post" action="https://www.dandh.ca/dhXML/xmlDispatch">
        <input type="hidden" name="xmlDoc"
          value="<XMLFORMPOST>
                   <REQUEST>orderEntry</REQUEST>
                   <LOGIN>
                     <USERID>{UserCode}</USERID>
                     <PASSWORD>{Password}</PASSWORD>
                   </LOGIN>
                   <ORDERHEADER>
                     <ONLYBRANCH></ONLYBRANCH>
                     <PARTSHIPALLOW>N</PARTSHIPALLOW>
                     <BACKORDERALLOW>N</BACKORDERALLOW>
                     <DROPSHIPPW>{Dropship Password}</DROPSHIPPW>
                     <SHIPTONAME>{Dropship Name}</SHIPTONAME>
                     <SHIPTOATTN>{Dropship Attention}</SHIPTOATTN>
                     <SHIPTOADDRESS>{Dropship Street Address}</SHIPTOADDRESS>
                     <SHIPTOADDRESS2>{Dropship Address Line 2}</SHIPTOADDRESS2>
                     <SHIPTOCITY>{Dropship City}</SHIPTOCITY>
                     <SHIPTOPROVINCE>{Dropship Province}</SHIPTOPROVINCE>
                     <SHIPTOPOSTALCODE>{Dropship Postal Code}</SHIPTOPOSTALCODE>
                     <SHIPCARRIER>{Shipping Carrier}</SHIPCARRIER>
                     <SHIPSERVICE>{Shipping Service Level}</SHIPSERVICE>
                     <PONUM>{Purchase Order Number}</PONUM>
                     <REMARKS>{Order Remarks}</REMARKS>
                     <ENDUSERDATA>
                       <ORGANIZATION>{End User's Company Name}</ORGANIZATION>
                       <ADDRESS>{End User's Street Address}</ADDRESS>
                       <CITY>{End User's City}</CITY>
                       <PROVINCE>{End User's Province Abbreviation}</ PROVINCE >
                       <POSTALCODE>{End User's Postal Code}</ZIP>
                       <AUTHQUOTENUM>{Authorization Number}</AUTHQUOTENUM>
                     </ENDUSERDATA>
                   </ORDERHEADER>
                   <ORDERITEMS>
                     <ITEM>
                       <PARTNUM>70LV0034UXCA</PARTNUM>
                       <QTY>1</QTY>
                       <BRANCH>Toronto</BRANCH>
                     </ITEM>
                   </ORDERITEMS>
                 </XMLFORMPOST>" />
        <input type="submit" value="Submit Order Entry Request" />
      </form>
    </div>
  </body>
</html>
```

Figure 9.1 – Canada Order Entry Request with End User Data HTML Form Post

Order Entry Response

Order Entry response will return the order number on successful submission, or an error message on submission failure.
(Figure 10)

\<XMLRESPONSE\>
        Parent: None
        Type: Complex
        Contents: Elements:
                \<STATUS\>
                \<MESSAGE\>
                \<ORDERNUM\>

\<STATUS\>
        Parent: \<XMLRESPONSE\>
        Type: String
        Contents: 'success' or 'failure'
                If 'success', \<XMLRESPONSE\> will
                contain \<ORDERNUM\>.
                If 'failure', \<XMLRESPONSE\> will
                contain \<MESSAGE\>.

\<MESSAGE\>
        Parent: \<XMLRESPONSE\>
        Type: String
        Contents: Error message or notification
        regarding request failure.

\<ORDERNUM\>
        Parent: \<XMLRESPONSE\>
        Type: Integer
        Contents: The D&H order number assigned

```
<?xml version="1.0" encoding="utf-8"?>
<XMLRESPONSE>
  <ORDERNUM>5005560</ORDERNUM>
  <STATUS>success</STATUS>
</XMLRESPONSE>
```
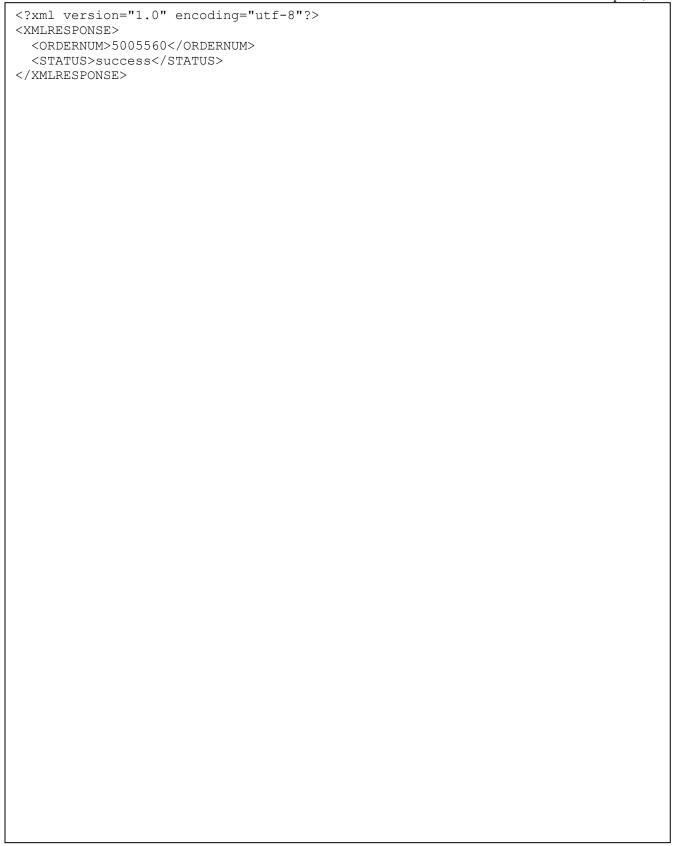
Figure 10 – Order Entry Response

Order Status Request

Order Status requests are made to return information on previously submitted orders. Multiple status requests may be made by including multiple <STATUSREQUEST> elements. (Figure 11)

<XMLFORMPOST>
      Condition: Required
      Parent: None
      Type: Complex
      Size: N/A
      Contents: Elements:
            <REQUEST>
            <LOGIN>
            <STATUSREQUEST>

<REQUEST>
      Condition: Required
      Parent: <XMLFORMPOST>
      Type: String
      Size: 25
      Valid Values: 'orderStatus'
      Contents: The type of request.

<LOGIN>
      Condition: Required
      Parent: <XMLFORMPOST>
      Type: Complex
      Size: N/A
      Contents: Elements:
            <USERID>
            <PASSWORD>

<USERID>
      Condition: Required
      Parent: <LOGIN>
      Type: String
      Size: 50
      Contents: DandH.com/ DandH.ca UserCode

<PASSWORD>
      Condition: Required
      Parent: <LOGIN>
      Type: String
      Size: 30
      Contents: The password associated with UserCode

<STATUSREQUEST>
      Condition: Required
      Parent: <XMLFORMPOST>
      Type: Complex
      Size: N/A
      Contents: Only one of these child elements may be included per each <STATUSREQUEST>, up to 50 <STATUSREQUEST> elements may be included in <XMLFORMPOST>.
            <PONUM>
            <ORDERNUM>
            <INVOICE>

<PONUM>
      Condition: Option
      Parent: <STATUSREQUEST>
      Type: String
      Size: 50
      Contents: To return the status of orders matching a PO number, include this element containing the unique Purchase Order number.

<ORDERNUM>
      Condition: Option
      Parent: <STATUSREQUEST>
      Type: String
      Size: 50
      Contents: To return the status of orders matching a D&H order number, include this element containing the D&H order number.

<INVOICE>
      Condition: Option
      Parent: <STATUSREQUEST>
      Type: String
      Size: 50
      Contents: To return the status of orders matching a D&H invoice number, include this element containing the D&H invoice number.

```
<!DOCTYPE html>
<html>
  <head>
    <title>D&H Order Status Request</title>
  </head>
  <body>
    <div align="center">
      <form method="post" action="https://www.dandh.ca/dhXML/xmlDispatch">
        <input type="hidden" name="xmlDoc"
          Value="<XMLFORMPOST>
                   <REQUEST>orderStatus</REQUEST>
                   <LOGIN>
                     <USERID>{UserCode}</USERID>
                     <PASSWORD>{Password}</PASSWORD>
                   </LOGIN>
                   <STATUSREQUEST>
                     <PONUM>{PO Number}</PONUM>
                   </STATUSREQUEST>
                   <STATUSREQUEST>
                     <ORDERNUM>{D&H Order Number}</ORDERNUM>
                   </STATUSREQUEST>
                   <STATUSREQUEST>
                     <INVOICE>{D&H Invoice Number}</INVOICE>
                   </STATUSREQUEST>
                 </XMLFORMPOST>" />
        <input type="submit" value="Submit Order Status Request" />
      </form>
    </div>
  </body>
</html>
```

Figure 11 – Canada Order Status Request HTML Form Post

Order Status Response

Order Status responses contain the information requested from an Order Status Request. The response will contain an <ORDERSTATUS> element for each Order/Branch combination tasked to fulfill the order. There may be multiple <ORDERSTATUS> elements for each <STATUSREQUEST> submitted. (Figure 12)

<XMLRESPONSE>
    Parent: None
    Type: Complex
    Contents: Elements
        <STATUS>
        <MESSAGE>
        <ORDERSTATUS>

<ORDERSTATUS>
    Parent: <XMLRESPONSE>
    Type: Complex
    Contents: Elements
        <DATE>
        <PONUM>
        <BRANCH>
        <ORDERNUM>
        <INVOICE>
        <INVTOTAL>
        <MESSAGE>
        <SOLDTO>
        <SHIPTO>
        <ORDERDETAIL>
        <PACKAGE>

<DATE>
    Parent: <ORDERSTATUS>
    Type: String
    Contents: The order date.

<BRANCH>
    Parent: <ORDERSTATUS>
    Type: String
    Contents: The D&H branch the order will be shipped from.

<PONUM>
    Parent: <ORDERSTATUS>
    Type: String
    Contents: The Purchase Order number for the order.

<ORDERNUM>
    Parent: <ORDERSTATUS>
    Type: Integer
    Contents: The D&H order number.

<INVOICE>
    Parent: <ORDERSTATUS>
    Type: String
    Contents: The D&H invoice number, if the order has been invoiced. If not, this element will contain "In Process".

<INVTOTAL>
    Parent: <ORDERSTATUS>
    Type: Decimal
    Contents: The sum total for the invoice. Contains attributes:
        Tax
        PST
        HST
        QST
        EHF
        Freight
        Handling
        SubTotal

<MESSAGE>
    Parent: <ORDERSTATUS>
    Type: String
    Contents: The order status message once an order has been invoiced, but has not yet shipped, or if the invoice contains non-stocked items, such as licenses, warranties, or factory-direct.

<SOLDTO>
    Parent; <ORDERSTATUS>
    Type: Complex
    Contents: The Sold-To elements:
        <NAME>
        <ADDRESS>
        <ADDRESS2>
        <CITY>
        <PROVINCE>
        <POSTALCODE>

<NAME>
    Parent: <SOLDTO>
    Type: String
    Contents: The Sold-To Name.

<ADDRESS>
>Parent: <SOLDTO>
>Type: String
>Contents: The Sold-To Address.

<ADDRESS2>
>Parent: <SOLDTO>
>Type: String
>Contents: The Sold-To Address continued.

<CITY>
>Parent: <SOLDTO>
>Type: String
>Contents: The Sold-To City.

<PROVINCE>
>Parent: <SOLDTO>
>Type: String
>Contents: The Sold-To Province

<POSTALCODE>
>Parent: <SOLDTO>
>Type: String
>Contents: The Sold-To Postal Code.

<SHIPTO>
>Parent: <ORDERSTATUS>
>Type: Complex
>Contents: The Ship-To elements:
>>>>>>>>>>>>>>>>>>><NAME>
>>>>>>>>>>>>>>>>>>><ADDRESS>
>>>>>>>>>>>>>>>>>>><ADDRESS2>
>>>>>>>>>>>>>>>>>>><CITY>
>>>>>>>>>>>>>>>>>>><PROVINCE>
>>>>>>>>>>>>>>>>>>><POSTALCODE>

<NAME>
>Parent: <SHIPTO>
>Type: String
>Contents: The Ship-To Name.

<ADDRESS>
>Parent: <SHIPTO>
>Type: String
>Contents: The Ship-To Address.

<ADDRESS2>
>Parent: <SHIPTO>
>Type: String
>Contents: The Ship-To Address continued.

<CITY>
>Parent: <SHIPTO>
>Type: String
>Contents: The Ship-To City.

<PROVINCE>
>Parent: <SHIPTO>
>Type: String
>Contents: The Ship-To Province

<POSTALCODE>
>Parent: <SHIPTO>
>Type: String
>Contents: The Ship-To Postal Code.

<ORDERDDETAIL>
>Parent: <ORDERSTATUS>
>Type: Complex
>Contents: <DETAILITEM> element for each item contained on the order.

<DETAILITEM>
>Parent: <ORDERDETAIL>
>Type: Complex
>Contents: Elements:
>>>>>>>>>>>>>>>>>>><ITEMNO>
>>>>>>>>>>>>>>>>>>><PRICE>
>>>>>>>>>>>>>>>>>>><QUANTITY>
>>>>>>>>>>>>>>>>>>><QTYBO>
>>>>>>>>>>>>>>>>>>><VENDOR>
>>>>>>>>>>>>>>>>>>><DESCRIPTION>

<ITEMNO>
>Parent: <DETAILITEM>
>Type: String
>Contents: The D&H Item Number

<PRICE>
>Parent: <DETAILITEM>
>Type: Decimal
>Contents: The item price.

<QUANTITY>
>Parent: <DETAILITEM>
>Type: Integer
>Contents: The quantity to ship

<QTYBO>
>Parent: <DETAILITEM>
>Type: Integer
>Contents: The quantity backordered

<VENDOR>
>Parent: <DETAILITEM>
>Type: String
>Contents: The item vendor's name

<DESCRIPTION>
>Parent: <DETAILITEM>
>Type: String
>Contents: The item description

<PACKAGE>

    Parent: <ORDERSTATUS>

    Type: Complex

    Contents: This element will be absent if the order has not invoiced, or if the invoice contains non-stocked items, such as licenses, warranties, or factory-direct. Elements:

        <DATESHIPPED>

        <CARRIER>

        <SERVICE>

        <SHIPPED>

        <TRACKNUM>

        <SHIPITEM>

<CARRIER>

    Parent: <PACKAGE>

    Type: String

    Contents: The carrier used for this package.

<SERVICE>

    Parent: <PACKAGE>

    Type: String

    Contents: The service level for this package.

<TRACKNUM>

    Parent: <PACKAGE>

    Type: String

    Contents: The tracking number assigned to the package. This number is subject to change if the package has not physically shipped.

<DATESHIPPED>

    Parent: <PACKAGE>

    Type: String

    Contents: The date the package was shipped from the Distribution Center.

<SHIPPED>

    Parent: <PACKAGE>

    Type: String

    Contents: Yes or No if package has physically shipped.

<SHIPITEM>

    Parent: <PACKAGE>

    Type: Complex

    Contents: There will be one <SHIPITEM> element for each item contained in the package. Elements:

        <SHIPITEMNO>

        <SERIALNO>

<SHIPITEMNO>

    Parent: <SHIPITEM>

    Type: String

    Contents: The D&H item number of the item.

<SERIALNO>

    Parent: <SHIPITEM>

    Type: String

    Contents: The serial number of the item if applicable.

<STATUS>

    Parent: <XMLRESPONSE>

    Type: String

    Contents: 'success' or 'failure'

        If 'success', <XMLRESPONSE> will contain < ORDERSTATUS >.

        If 'failure', <XMLRESPONSE> will contain <MESSAGE>.

<MESSAGE>

    Parent: <XMLRESPONSE>

    Type: String

    Contents: Error message or notification regarding request failure.

```xml
<?xml version='1.0' encoding='UTF-8' ?>
<XMLRESPONSE>
  <ORDERSTATUS>
    <DATE>12/15/16</DATE>
    <BRANCH>Toronto</BRANCH>
    <PONUM>ABC123456789</PONUM>
    <ORDERNUM>1234567</ORDERNUM>
    <INVOICE>7654321</INVOICE>
    <INVTOTAL Tax="0" PST="0" HST="0" QST="0" EHF="0" Freight="0"
              Handling="0" SubTotal="671.60">
      671.60
    </INVTOTAL>
    <SOLDTO>
      <NAME>{Sold-To Name}</NAME>
      <ADDRESS>{Sold-To Street}</ADDRESS>
      <ADDRESS2>{Sold-To Street Line 2}</ADDRESS2>
      <CITY>{Sold-To City}</CITY>
      <PROVINCE>{Sold-To Province Abbreviation}</PROVINCE>
      <POSTALCODE>{Sold-To Postal Code}</POSTALCODE>
    </SOLDTO>
    <SHIPTO>
      <NAME>{Ship-To Name}</NAME>
      <ADDRESS>{Ship-To Street}</ADDRESS>
      <ADDRESS2>{Ship-To Street Line 2}</ADDRESS2>
      <CITY>{Ship-To City}</CITY>
      <PROVINCE>{Ship-To Province Abbreviation}</PROVINCE>
      <POSTALCODE>{Ship-To Postal Code}</POSTALCODE>
    </SHIPTO>
    <ORDERDETAIL>
      <DETAILITEM>
        <ITEMNO>FP781</ITEMNO>
        <PRICE>444.92</PRICE>
        <QUANTITY>1</QUANTITY>
        <QTYBO>0</QTYBO>
        <VENDOR>BenQ</VENDOR>
        <DESCRIPTION>1280 x1024 TFT, LCD;Silver</DESCRIPTION>
      </DETAILITEM>
      <DETAILITEM>
        <ITEMNO>WRT54G</ITEMNO>
        <PRICE>117.86</PRICE>
        <QUANTITY>1</QUANTITY>
        <QTYBO>0</QTYBO>
        <VENDOR>Linksys</VENDOR>
        <DESCRIPTION>CABLE/DSL RTR 802.11G W/SWITCH</DESCRIPTION>
      </DETAILITEM>
      <DETAILITEM>
        <ITEMNO>WUSB11</ITEMNO>
        <PRICE>54.41</PRICE>
        <QUANTITY>2</QUANTITY>
        <QTYBO>0</QTYBO>
        <VENDOR>Linksys</VENDOR>
        <DESCRIPTION>USB 11MBPS Wireless Adapter</DESCRIPTION>
      </DETAILITEM>
```

Figure 12.1 – Canada Order Status Response

```xml
      <DETAILITEM>
        <ITEMNO>MCX0005KKN00</ITEMNO>
        <PRICE>89.12</PRICE>
        <QUANTITY>0</QUANTITY>
        <QTYBO>2</QTYBO>
        <VENDOR>Coolermaster</VENDOR>
        <DESCRIPTION>MasterCase 5</DESCRIPTION>
      </DETAILITEM>
    </ORDERDETAIL>
    <PACKAGE>
      <CARRIER>Purolator</CARRIER>
      <SERVICE>Ground</SERVICE>
      <TRACKNUM>{Carrier Tracking Number}</TRACKNUM>
      <DATESHIPPED>12/17/16</DATESHIPPED>
      <SHIPPED>yes</SHIPPED>
      <SHIPITEM>
        <SHIPITEMNO>FP781</SHIPITEMNO>
        <SERIALNO>99l267231123300051hs2311</SERIALNO>
      </SHIPITEM>
    </PACKAGE>
    <PACKAGE>
      <CARRIER>Purolator</CARRIER>
      <SERVICE>Ground</SERVICE>
      <TRACKNUM>{Carrier Tracking Number}</TRACKNUM>
      <DATESHIPPED>12/17/16</DATESHIPPED>
      <SHIPPED>yes</SHIPPED>
      <SHIPITEM>
        <SHIPITEMNO>EZXS16W</SHIPITEMNO>
      </SHIPITEM>
      <SHIPITEM>
        <SHIPITEMNO>WRT54G</SHIPITEMNO>
      </SHIPITEM>
    </PACKAGE>
  </ORDERSTATUS>
  <STATUS>success</STATUS>
</XMLRESPONSE>
```

Figure 12.2 – Canada Order Status Response (continued)