BAAN IV Automotive Global Solution
Functions and Features for BAAN IVc4 ags0

Product Information

P3271A US
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About this document

In this document, the functions and features of the new ags0 solution are described. This document is meant to assist sales and marketing departments in outlining the advantages of the package to prospective customers.

Chapter 1, “Introduction,” provides an introduction to BAAN IVc4 ags0.

Chapter 2, “Automotive Sales,” describes the new functions and features for the Automotive Sales.

Chapter 3, “Planning,” describes the improved smoothing functionality in MPS.

Chapter 4, “Automotive Shipping,” describes the new functions and features for the Automotive Shipping.
1. **Introduction**

This document provides an overview of all the new features and enhancements released in the Baan Automotive Global Solution, BAAN IVc4 ags0. Ags0 combines the functionality of Baan’s European (scc1) and North American (nas0) automotive solutions to offer a single application for globally operating automotive suppliers, as well as many other enhancements.

1.1 **General**

As BAAN IVc4 ags0 combines the solutions BAAN IVc4 nas0 and BAAN IVc4 sch1/scc1, all standard features that were present in these two different releases are now provided in a single package.

Baan suggests that anyone who uses the sch1/scc1 functionality, reads this document, and also reads the *Features & Function* (P3134A US) of the nas0 version to gain an overview of all the new enhancements on top of sch1/scc1.

The enhancements performed in addition to the merge affect the following areas:

- Unified Schedule Processing.
- Package information on Schedule and Shipping Schedule level.
- Requirement frequency in schedules.
- Maintain session for GM/Opel Pick-Up-Sheets.
- Length of the Production Sequence Number.
- Schedule length in tdinv150.
- Annual reset.
- MPS smoothing functionality.
- Generate planned deliveries by delivery point/dock.
- Return of shipment references per handling unit in an ASN.
- Annul a shipment / Cancel and resend an ASN with the original ASN number.
- Packaging totals on Advice Note- and MBOL/Load-Header.
- Printing of shipment documents.
- Additional fields for barcode labels.
- Weight calculation per handling unit.
- Reservation in one or in multiple warehouses.
## Terms and abbreviations

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<th>Term</th>
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<tr>
<td>ags0</td>
<td>Automotive Global Solution Release 0 of BAAN IVc4</td>
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<tr>
<td>AIAG</td>
<td>Automotive Industry Action Group</td>
</tr>
<tr>
<td>AVIEXP</td>
<td>Dispatch Advice EDI-Message, Advanced Shipment Notice (ASN) in ODETTE Standard (subset of EDIFACT DESADV).</td>
</tr>
<tr>
<td>Cum</td>
<td>Cumulated quantities or cumulated values</td>
</tr>
<tr>
<td>Cum-Received</td>
<td>Cumulated receipts from the annual cum-reset date up to the schedule generation date</td>
</tr>
<tr>
<td>Cum-Required / Cum-Previous</td>
<td>Cumulated planned order quantities from the annual cum-reset date up to the date from which the customer replaces the existing “orders” (Date of Cum-Previous)</td>
</tr>
<tr>
<td>CALDEL</td>
<td>ODETTE message for Shipping Schedules and KANBAN Call-offs. Subset of EDIFACT DELJIT.</td>
</tr>
<tr>
<td>DESADV</td>
<td>EDIFACT message to transmit Advanced Shipment Notices (ASN).</td>
</tr>
<tr>
<td>DELJIT</td>
<td>EDIFACT Message used to transmit Shipping Schedules, KANABN Call-offs and Production Synchronous Calls</td>
</tr>
<tr>
<td>DC</td>
<td>DaimlerChrysler</td>
</tr>
<tr>
<td>DON</td>
<td>Delivery Order Number</td>
</tr>
<tr>
<td>EDI</td>
<td>Electronic Data Interchange</td>
</tr>
<tr>
<td>EDIFACT</td>
<td>Electronic Data Interchange For Administration, Commerce and Transport</td>
</tr>
<tr>
<td>GM</td>
<td>General Motors</td>
</tr>
<tr>
<td>HU Handling Unit</td>
<td>Handling Unit / Baan IV term is: Outer Package.</td>
</tr>
<tr>
<td>Outer Package</td>
<td>In ODETTE terms a handling unit is a device that can be handled physically (for example, a pallet) and can carry one or several packages. A package is a container in which the article itself is loaded. Handling Units can be differentiated: Simplified Handling Unit (no inner packages) Nonsimplified Handling Unit (with inner packages)</td>
</tr>
<tr>
<td>Package Inner Package</td>
<td>A package is a container in which the article itself is loaded. The BAAN IV term is: Inner Package A package can also be a Handling Unit (HU).</td>
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<td>nas0</td>
<td>The North American Automotive Extension, BAAN IVc4 nas0</td>
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<tr>
<td>ODETTE</td>
<td>Organization for Data Exchange by Tele Transmission in Europe</td>
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<td>OEM</td>
<td>Original Equipment Manufacturer, such as the Automotive Assemblers such as FORD, VW, and so forth</td>
</tr>
<tr>
<td>PSA</td>
<td>Peugeot Citroen; French vehicle manufacturer</td>
</tr>
<tr>
<td>PUS</td>
<td>Pick-Up-Sheet Number (= Identification for a special call-off order from Opel/GME)</td>
</tr>
<tr>
<td>sch1 and scc1</td>
<td>The earlier European Automotive Extension (sch1) with Controlling (scc1).</td>
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<tr>
<td>VDA</td>
<td>Verband der Automobil Industrie, which also defined the VDA-Message Standard (German Automotive Organization).</td>
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2. **Automotive Sales**

2.1 **Unified Schedule Processing**

The handling of schedules and shipping schedules is completely revised in ags0. It now allows the processing of the best known types worldwide within one application.

Supported are the following types of schedules and shipping schedules:

- With Cum-Received as the cumulative synchronization information (received based).
- With Cum-Required as the cumulative synchronization information (order based).
- With requirements transmitted as cumulative figures (cums) or as quantities.
- With shipment references, such as RAN, DON, KANBAN, or Delivery Call Numbers.
- Without any synchronization information.

In addition, a new special consolidation process “Consolidate Original Sales Schedules” supports the handling of:

- Daimler Chrysler’s Model Year releases.
- FIAT's Delivery and Collection releases.

Ags0 can handle schedules in:

- Original/Total Replacement mode (new schedule overwrites the previous one).
- Partial Replacement mode (new schedule replaces the previous one between a given Horizon Start Date and a Horizon End Date).
- Change/Add mode (new requirements are added, existing date/time buckets are updated).

A parameter set for schedules as well as one for shipping schedules on delivery address level is now controlling, which type of schedule and shipping schedule is received from a customer. To facilitate the setting, the user can find examples in the session Help of “profiles” for a number of OEMs.

The new “Cum-Start” is now in any case the common “anchor” of an internal Schedule/Shipping schedule. The Cum-Start of an internal Schedule/Shipping schedule is:

- Cum-Received for a “Received Based” schedule.
- MINIMUM (Cum-Required; Cum-Shipped) for an Order Based schedule.
The “shipment reference” (Customer Authorization) is added to the key fields on shipping schedule line level, which allows to store multiple references for the same date/time, such as KANBAN numbers, or, for example, delivery-call-numbers per handling unit as required by Peugeot/Citroen (PSA) in their CALDEL shipping schedule.

Figure 2  Multiple shipment references with the same date/time
On original shipping schedule lines, the latest date/latest time and the earliest date/earliest time can now be stored to keep the original data sent, for example, by PSA (Peugeot, Citroen).

For partial replacements and change schedules you must still be able to see the original data sent by the customer and an “assembled” total view of the new schedule. Therefore, ags0 now allows two views per Schedule and Shipping schedule.

- The “original” tables contain the customer’s original (for example, a release in change mode)
- The “internal” tables contain the internal “assembled” view (for example, the changed schedule).

*Figure 3 Original and internal view of schedules and shipping schedules*
2.2 Package information on Schedule and Shipping schedule level

Package information received in a schedule or shipping schedule is checked against the default package information defined for the Sales Contract-Position and is stored in new tables and a history table.

When schedules or shipping schedules are loaded, eventual differences are now reported on the EDI-Error Protocol. This is especially important for Call-Offs on Handling Unit (HU) level, where the user must check the EDI-Error Protocol, as the Call-Off quantity must be equal to the quantity per HU or a multiple of the inner packaging quantity of an HU (for more information, refer to “Ability to return shipment references per Handling Unit in an ASN,” in Chapter 4).

This information can now be displayed in the Original Schedule Header with a zoom to the package information received in a schedule. The same can be performed for the packaging information received in a Shipping schedule. Another zoom from this session shows package details.

![Figure 4 Schedule Package Data](image)

2.3 New Requirement Frequency “Range of Weeks”

In addition to the familiar requirement frequencies “daily,” “weekly,” and “monthly,” a new requirement type “range of weeks” is now introduced on Original Schedule Requirement line level. In sch1/scc1, the split of “from-to week” requirements into weekly requirements was performed by the 3rd-party EDI-System (which is still possible). Now schedules from customers that send “from-to week” requirements can be stored in their original view.

A “range of weeks” requirement always starts with the date of the Monday of the “from week” and ends on the Sunday of the “to” week.

On the sales side a “monthly” requirement is handled in MPS as if it starts on the 1st of a calendar month and ends on the last day of a month.
2.4 Maintain Sessions for GM/Opel Pick-Up-Sheets

Usually General Motors (GM) / Opel transmits their Pick-Up-Sheet by EDI. But the experience of many current customers is, that in exceptional situations, Pick-Up-Sheets are transmitted by Fax/email, thus requiring a maintain session to enter them. The new sessions allow to maintain these Pick-Up-Sheets now.

2.5 Production Sequence Number increased to 12 characters

The Production Sequence Number (tdssc602.jbsq / tdssc018.jbsq) has increased from numeric 9 to alphanumeric 12 characters to fulfill VDA standard. Porsche, for example, uses the full length.

2.6 Schedule in Full Length in “Planned Inventory Transactions”

The display of the Planned Inventory Movements now shows the complete picture of a schedule. In addition to “immediate” and “released,” the requirements “planned” and “forecast” are shown. With this, the demand of material releases sent only as “forecast,” are contained in the view.

2.7 Updated Annual Reset

The reset quantity of the last Annual Reset is now shown on contract header level (tdssc0101m000 form 8, tdssc0501m/s000 form 7, and tdssc0401m000). This facilitates the check after a reset. Due to the new unified schedule concept, slight changes of the Annual Reset were necessary, but basically the following functionality, known from sch1/scc1 and nas0, is retained:

- Annual Reset from a Selected Delivery (tdssc4107m000).
- Annual Reset from Date (tdssc4207m000), also retroactive and for a range of customers.
- Manual Cumulative Adjustments (tdssc2107m000).
3. Planning

3.1 Improved smoothing functionality in MPS

The Master Production Scheduling (MPS) is changed in such a way that it now takes the 1st of a month as the requirement date of a “monthly” Sales Schedule requirement. Corresponding to that, the function to “smooth a monthly requirement” splits the monthly demand across all working days of the month, according to the Company Calendar.
4. Automotive Shipping

4.1 Generate Planned Deliveries by Delivery Point/Dock

In an AIAG environment, the material issuer (MI), ship-to address (ST), and customer item number of a schedule/shipping schedule must build a unique key to identify a contract position. For this combination, only one schedule can exist.

Some OEMs require shipping to varying delivery points, so the delivery point can change from schedule to schedule, but the material issuer and the ship-to address remain the same.

The Automatically Create Planned Deliveries session is enhanced to generate advice notes / loads per customer, delivery address and now also per delivery point.

Simply setting the parameter **Deliveries by Delivery Point** in the Maintain Delivery Addresses session to Yes, if shipments per customer, delivery address, and delivery point are to be created, enables this functionality. This value is also used as a default for all further inserted delivery addresses.

The Maintain Delivery Points session allows you to maintain all possible delivery points of a customer.

![Figure 6 Maintain Delivery Addresses / Maintain Delivery Points](image-url)
4.2 Ability to return shipment references per Handling Unit in an ASN

PSA (Peugeot, Citroen) generates Shipment References per Handling Unit (HU) and calls off per Handling Unit and thus requires, that the supplier returns in the ASN (AVIEXP message) the Shipment Reference on Handling Unit level on package line level. A typical PSA CALDEL shipping schedule is shown in Figure 2.

To facilitate this, a new parameter ‘Reference Level’ on customer delivery address level is introduced to control, whether the shipment reference (PSA term: Delivery Call Number) has to be returned on advice-note-, or package-line-level.

4.3 Annul a Shipment / Cancel and Resend an ASN

If a mistake occurs in the shipping area of a supplier, for example, the quantities loaded on the truck do not match the quantities reflected by the BAAN system, the customer receives incorrect information through ASN about the shipped quantities. Also, the shipping documents will show the wrong quantities.

In ags0, the cancel process of the nas0 solution is reworked and now provides a comfortable functionality to annul a shipment by ASN/Advice Note number or by Master Bill of Lading number (MBOL).

The following additions are also made:

- A shipment can be annulled without sending a cancel message or a new ASN (for example, in a VDA environment with an VDA4913 – see Figure 8) or that a shipment can be annulled and a cancel message and a new corrected ASN can be sent (for example, in AIAG environments with a 856 – see Figure 7).
- In the cancel message and in the new corrected message, the advice note / MBOL number of the original is retained.
- Packaging accounts are updated.
- Inventory corrections are performed for the delivered items and for packaging items.

![Figure 7 Cancel and resend of an ASN according to AIAG Standard](image-url)
The steps to annul a shipment, send a cancel ASN and resend the corrected ASN message are:

1. Cancellation of the wrong shipment with the Annul Shipment/Cancel ASN session by the user.

2. The system cancels the shipment, and performs:
   - Inventory adjustments for items and packing and updates of the packaging accounts.
   - Financial adjustments.
   - Adjustments of cums (contract) and outstanding quantities in schedules.
   - Adjustments of the shipping log and the reservation list.

3. Baan puts the advice note / MBOL back to status In Preparation and sets an internal flag to Cancelled. Baan:
   - Creates a copy of the original advice note under a new internal number (this copy holds the original ASN data).
   - Marks this copy as the Cancel ASN and moves this to the EDI message queue to be sent out as the cancel message.
   - Sends this copy, but uses in the message the cancelled advice note number or MBOL number.
Correction of the shipment, printing of the delivery documents and confirmation, as in step 4 of the annul case by the user.

The combination of an internal advice note flag set to Cancelled and the parameter Cancel & Resend ASN tells Baan that the new corrected ASN is sent.

### 4.4 Packaging Totals on Advice Note and MBOL/Load-Header

Some OEMs require the totals of packaging types sent to be shown in the ASN and on the Advice Note Document; Ford U.S., for example, requires sending the totals of delivered packaging as separate positions on the advice note, as shown here:

<table>
<thead>
<tr>
<th>BSN Advice Note No. (SID)</th>
<th>LIN</th>
<th>BP</th>
<th>item 4711 100 pcs</th>
<th>LIN</th>
<th>BP</th>
<th>item 4712 500 pcs</th>
<th>LIN</th>
<th>RC</th>
<th>PALLET 2 pcs</th>
<th>LIN</th>
<th>RC</th>
<th>BOX-1 16 pcs</th>
</tr>
</thead>
</table>

*Figure 10 Requirement of Ford U.S. to return packaging totals*

Other OEMs and ASN message definitions can require that the information of how many outer packages (handling units) are contained in the advice note / in the load is sent/printed on advice note or MBOL/load header level. Also the gross- and net-weight per advice note and load are sometimes required, for example, on freight papers and in the ASN message.

Ags0 is now enhanced to fulfill these requirements:

- By calculating the totals per shipped packing type on advice note and MBOL level; by summarizing the packaging quantities from the packaging lines – see Figure 12.
- By calculating the number of outer packages (handling unit quantity) on advice note and MBOL level – see Figure 11.
- By displaying, whether on an advice note, or an MBOL, all outer packages are of the same shape (the Mixed Type display field can be Yes/No - see Figure 11).
- By calculating the gross- and net-weight on advice note and MBOL level online with each update.
The number of outer packages is calculated by counting all MAIN package quantities of level 2, if level 2 exists as an advice note position. If not, the MAIN level 1 packages are added up.

Figure 11 Zoom to Display Packaging by Advice Note

Figure 12 Display Packaging Items by Advice Note

A similar zoom to the packaging totals of an MBOL is provided.
4.5 Customer-specific printing of shipment documents

The printing of shipment documents in ags0 is facilitated. You can now:

- Predefine in general which shipping documents are to be printed.
- Predefine per customer delivery address which shipping documents are to be printed if customer-specific documents are required.
- Predefine the number of copies to be printed per document.
- Predefine on which device a user wants to print a document type.

The set up requires the following 4 steps, where Step 4 is only necessary if a customer requires special shipping documents. For these sessions, the new menu point Enhanced Report Handling under BaanIV Supply Chain / BaanIV Supply Chain Common /, is added.

**Figure 13 Steps to predefine the printing of shipping documents**

**Step 1**  The document types are marked, which must be printed in general. Print Always means that in the Print Delivery Document session, the selection “print” or “automatic” is shown. The document types are loaded during the system installation from the Reports by Session table.

**Step 2**  The reports, which can be printed under the document type, must be defined. This data is used when the user selects a document type in Step 5. If more than one report per document type is defined, you can select one as the default report (for example, the national advice note format). You can also define the number of copies.

**Step 3**  The devices, on which a user wants to print a document type, are defined. This can, for example, be used to enable a shipment department to print the document type Label-Large on a special barcode printer in the dispatch zone and the Advice Note type on a normal laser printer in an office.
Step 4  A customer delivery address specific report can be defined if this report must always be printed and a constant number of copies must be printed.

The print selections are defaulted from the general settings set in Step 1 through 4, but can be changed.

Automatic means, that the system detects customer specific print definitions which deviate from the general settings. The documents are printed according to the settings done in the enhanced report handling.

Print is used, when the document has to be printed, independent of the settings in the enhanced report handling.

No Print is used, when the document has not to be printed, independent of the settings in the enhanced report handling.

4.6 Additional fields for barcode labels

Ags0 offers two possibilities to print shipping labels:

- Printing of predefined ODETTE labels with the Print Delivery Documents by Advice Note Number/MBOL session – see Figure 14.

- Design of the layout of a shipping-label (self-defined label) with the Maintain Label Formats session and to generate and print labels with the Generate Labels session and the Print Formatted Labels session. See the following figures.

**Figure 14 Print Delivery Documents by Advice Note Number/MBOL**
The second topic is an all-new ags0 functionality for current sch1/ssc1 users. Therefore, it is described in detail in this section.

Nas0 users will notice, that the Generate Label functionality of nas0 is enhanced by several Advice Note and Advice Note Position fields, which are now additionally available for label printing.

For example, the Pass through fields, which can hold the GM/Opel DELJIT PCI Segment information, or the Job Sequence and the Vehicle Identification Number from the advice note positions.

If predefined standard ODETTE Labels and self-designed labels are used in combination, you can print the standard labels with the Print Delivery Documents by Advice Note Number/MBOL session and also start the Generate Labels session and the Print Formatted Labels session to print the self-defined labels.

![Diagram of label generation process]

**Figure 15 Design the layout of labels and generate labels.**

Take the following steps to print user-formatted labels:

1. Define the label code, or label name and link it to a report in the Maintain Label Types session – see Figure 16.

2. The layout of the label must be designed by entering for each field, identified by a number, the coordinates, line, headline, data (printed characters), barcode, length and height, plus a title – see ‘Maintain Label Formats’ in Figure 17.

3. Assign this label code to the packaging defaults of a contract position.

4. From the packaging defaults, the label code is defaulted to the advice note packaging, when the advice note is generated by the Automatically Create Planned Deliveries session. Otherwise, the label code is entered.

5. When selecting the advice notes, for which shipping labels must be generated in the Generate Labels session, the label records for the selected advice notes with the maximum of printable data are generated.
6. The content of these label records can be maintained.

7. The labels are printed with the Print Formatted Labels session. Only the data that is defined for the label in the Maintain Label Formats session is printed in Step 2.

Additionally, sessions exist to Display Labels by Advice Note Number, to Clear Labels, and a session to check if all labels of an advice note position are printed and attached to the packages – Display Scan to Ship.

![Figure 16 Maintain Labels Types](image1)

![Figure 17 Maintain Label Formats](image2)

There is no report for self defined labels via tdssc0177m000.
4.7 Weight of a Handling Unit

The shipment document print session is enhanced; it can now:

- Calculate the gross- and net-weights on inner and outer package level for mixed loads.
- Print on the ODETTE-Label of an outer package (handling unit) the number of inner packages according to the rules defined in VDA4902.

The rule for the **Number of Packages** label field is:

- The **Number of Packages** field contains the number of inner packages for a two level package structure. For a single package (type S), the number of packages is always filled with ‘1’.

4.8 Reservation in one or in multiple warehouses

A new parameter is introduced in the Maintain SSC Parameters session, to control whether the reservation of items to be shipped is performed only in the warehouse that is defined on advice note position shipment line level or in all nettable, normal warehouses of a Company (old BAAN IVc4 sch1/ssc1 standard).

A Baan customer now has the option to operate according to either of these two options.

\[Figure 18\] Determine in which warehouses the reservation is performed.